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JAIPUR STATE.

PUBLIC WORKS REPORT

FOR THE

Raj Official Year from 1st September 1902 to 31st August 1903.



Allahabad

PRINTED AT THE PIONEER PRESS

1904

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1. Lala Rup Chand, Assistant Engineer.
2. Babu Kaloda Nandan Mukerjee, Assistant Engineer.
3. Lala Indra Sahai, Assistant Engineer.

JAIPUR STATE. PUBLIC WORKS REPORT

FOR THE

Raj Official Year from 1st September 1902 to 31st August 1903.

I.—GENERAL REMARKS.

Expenditure.—The expenditure has been as follows:—

			Rs. a. p.	Rs. a. p.
ORIGINAL WORKS—				
Buildings	...	...	...	598 4 9
Roads	...	...	...	4,892 9 4
REPAIRS—				
Buildings	...	...	...	3,769 12 5
Roads	...	...	...	1,31,220 2 10
IRRIGATION WORKS	...	...	...	2,14,398 12 10
MISCELLANEOUS PUBLIC IMPROVEMENTS	...	...	...	67,968 13 1
CITY WATER SUPPLY, MAINTENANCE, ETC.	...	...	...	36,139 5 8
STATE COTTON PRESSES—				
Jaipur	{ (a) Capital	...	—3 12 5 }	34,703 11 8
	{ (b) Maintenance	...	34,707 8 1 }	
Mandawar	{ (a) Capital	...	1,302 11 9 }	33,226 12 8
	{ (b) Maintenance	...	31,924 0 11 }	
Gas Works—Maintenance, etc.	...	...	...	37,559 12 3
Establishment, P. W. D.	...	...	...	56,132 2 3
Imarat Works	...	...	...	46,003 11 11
Other State Works	...	...	...	664 3 3
Miscellaneous other items*	...	...	...	41,939 15 1
		Total	...	7,09,238 2 0
Jaipur Sewai-Madhopur Railway	...	...	...	2,930 9 2
		GRAND TOTAL	...	7,12,168 11 2

Supervision—The total for supervision of works amounts to Rs. 78,547. Deducting this from the total outlay, it gives a percentage of 12·39 as shown at foot.†

* This is the total amount of bills issued from 1st September 1902 to 31st August 1903 for works, etc. done for private individuals and certain other items noted in Appendix A.

† Taking percentage of establishment on sanctioned works:—

7,12,169 : 100 :: 56,132 : 7·88.

Adding cost of extra establishment, which is Rs. 22,415

56,132 + 22,415 = 78,547.

Actual expenditure on works minus extra establishment—

6,56,037—22,415 = 6,33,622.

6,33,622 : 100 :: 78,547 : 12·39.

That is, after deducting the sanctioned and extra establishment from the whole expenditure, the cost of supervision and control on the actual outlay for works comes to 12·39.

Plans.—There were 284 plans prepared in the drawing office, comprising 67 original designs and 135 tracings, besides 82 plans drawn and submitted by the Sub-Divisional Officers.

Estimates.—The number prepared during the year was :—

		No.	Rs.	a.	p.
In the P. W. Department	...	415	3,26,493	0	0
„ „ Imarat	...	75	1,24,277	0	0
„ „ Gas Works	...	8	2,746	0	0
Total	...	498	4,53,518	0	0

Final Bills.—The number submitted during the year was :—

		No.	Rs.	a.	p.
In the P. W. Department	...	317	9,62,904	15	6
„ „ Imarat	...	150	45,980	7	8
„ „ Gas Works	...	8	13,348	14	1
Total	...	475	10,22,234	5	3

Work in Office.—

	<i>English.</i>	No.
Letters or papers received	...	3,830
„ „ despatched	...	3,749
Vernacular „ disposed of	...	2,212
Day-books checked	...	2,656
Ledger heads kept	...	694
Muster Rolls checked	...	3,249
Bills of contractors and other vouchers	...	3,748
	<i>Persian.</i>	
Papers received	...	10,277
„ despatched	...	6,004

Cash Balances outstanding against this office on 30th June 1903 :—

			Rs.	a.	p.
Cash	...	...	14,699	5	11
Advances	...	...	1,42,582	8	1
Stock, General	...	...	48,199	1	8
„ City Water Supply	...	...	47,328	6	10
Imarat Works	...	...	236	0	8
Works carried out on sanction,—funds to be provided and adjustable next year and miscellaneous	...	...	41,497	4	11
Total	...	...	2,94,542	12	1

Stock.—The total value on 31st August 1903 was:—

				Rs.	a.	p.
City Works	...	...	...	5,884	11	11
Tools	...	...	...	10,312	10	1
Plant and Machinery	...	...	...	97	1	5
Instruments	...	...	...	1,620	2	8
Tents and office furniture	...	...	...	255	6	0
Small stores, metal, etc.	...	...	...	25,119	0	11
Timber	...	...	...	4,880	9	3
House fittings	...	...	...	1,642	3	1
Miscellaneous	...	...	...	6,591	5	3
			Total	56,403	2	7

Savings and unexpended balances remitted to the Raj Treasury were:—

				Rs.	a.	p.
On account of the P. W. Department	...	...	...	87,130	13	11*
„ „ Imarat	...	...	...	6,049	5	2
„ „ Cotton Press, Jaipur	...	...	...	89,705	11	7
„ „ Gas Works	...	...	...	3,200	8	2
			Total	1,86,086	6	10

Revenue remitted.—Besides the above the following sums were also remitted to the Raj Treasury:—

				Rs.	a.	p.
Cotton Press, Jaipur, Revenue	...	...	...	76,632	10	0
„ „ „ Miscellaneous	...	...	...	3,971	0	9
„ „ Mandawar, Revenue	...	...	...	54,024	12	0
„ „ „ Miscellaneous	...	...	...	1,620	3	6
Gas Works, Revenue	...	...	...	4,058	14	3
City Water Supply Revenue	...	...	...	1,213	13	6
Ram Newas Garden „	...	..	...	1,312	0	7
Agra Kothi Revenue	...	...	...	799	3	3
Dak Bungalows Rent	...	...	...	865	11	0
Roads, by sale of trees, etc.	...	...	...	956	9	8
Sale of Jaipur Portfolios of Architectural Details	...	...	...	344	10	9
Ice Revenue	...	...	...	2,080	15	7
Books on Jaipur Observatory and its Builder	...	...	...	12	1	6
Lime manufacture	...	...	...	15,142	12	5
Jaipur Portfolios of Architectural Details, presentation account	...	...	...	75	10	3
			Total	1,63,120	1	0

* Note—Rs. 847-13-1 included in the account of work.

Works.—The chief works in charge of this Department comprise the following :—

Original Works and Repairs—

Buildings.
 Roads.
 Irrigation works and Zillahdari Abpashi Departments.
 Surveys of new projects.
 Ram Newas Public Gardens.
 City Conservancy Tramway.
 City water-supply.
 Imperial Government works.
 The Albert Hall.
 Church.
 Stone Cutters' yard.
 Kothi of H. H. the Maharaja at Agra.
 Ice shop.
 Dāk bungalows.
 Workshops.
 Designs.

Also the general superintendence of—

The Gas Works.
 Two State Cotton Presses.
 The Raj Imarat Department.
 The maintenance of existing works on 73 miles of railway construction from
 Sauganeer to Sewai-Madhopur.

The following is a brief note on the more important works carried out during the year. The full particulars of each work can be found in the reports of the Assistant Engineers, Gas Works, Cotton Presses and Imarat Department, which are printed separately.

II.—BUILDINGS.

Mayo Hospital.—The buildings were whitewashed, and many renewals and repairs were carried out, including a new grey lime polished floor in the medical ward, putting springs to render all doors and windows self-closing, opening two new doors to connect the new operation room with the central room of that block, and supplying new night-soil buckets and latrine pans for the latrines.

Total cost of all works, Rs.2,124-4-9.

Lansdowne Hospital.—Thirty-one springs have been fitted to render the doors and windows self-closing.

Poorhouse—The eastern wall, 113 ft. × 6 ft. 6 inches × 15 inches thick has been rebuilt.

Purani Basti Dispensary.—The buildings have been whitewashed inside and outside and the courtyards of the native doctor and compounder paved and drained.

Old Jail.—Owing to the continued subsidence of the water level in the wells, five of these have been deepened by sinking wooden cylinders in them.

Imperial Service Transport Corps.—Thirteen new quarters have been built on the site of the original mud huts. These are of mud walls with corrugated iron roofing. Eleven of these are 13 ft. 9 inches × 9 ft. 6 inches and 10 ft. 9 inches in height. The remaining two are 13 ft. 8 inches × 11 ft. wide, the increased width being obtained by reducing the slopes in the roof. Each quarter is provided with a courtyard.

At the Inspecting Officer's bungalow near the Rahdari the outhouses and stables have been re-thatched.

Natani ka Bagh.—The west verandah, upper story, and garden baradari have been re-thatched, and a new fowl house built with a corrugated iron roof and wire netting.

Superintending Engineer's Bungalow.—The stables have been entirely re-thatched, and a corrugated iron verandah built in front of the coach house 47 ft. 3 inches long \times 8 ft. wide.

The outhouses have been whitewashed.

The small well in the garden, which had been sunk deeper, has been cleared, and a layer of ballast laid at the bottom to keep out the sand coming up from below.

Bandmaster's Bungalow.—The outhouses have been re-thatched and also the back verandah of the bungalow.

Residency.—Extensive repairs and renewals were carried out under the Imarat Department as detailed in the Imarat report, in connection with the visit of H. E. the Viceroy.

The quarters of the staff were all thoroughly repaired.

An arrangement has been made to automatically sprinkle the tatties during the hot season.

District Buildings.

Eastern District.—New pucca tibarras with godowns have been built at *Hindaun* and *Gangapur* in connection with the roads.

At *Khurr* a similar tibarra of kutch-pucca masonry, lime pointed, with two additional quarters for two muhafizan have been built at a cost of Rs. 757-12-10.

At *Mahwa*, the five pucca outhouses, mentioned in last year's report, have been completed at the Overseer's quarters.

New *Muhafiz chaukies* have been built at *Khari Bund* and *Jaisagar Tond*.

General repairs, chiefly to thatching, have been done to the Chaukis at *Bishan Samand*, *Wazirpur*, *Mahwa*, *Fateh Sagar* and *Toda Bhim*.

Petty repairs and alterations were done at *Hindaun* and *Mahwa* dispensaries and to the Jail and Thanah at *Hindaun*.

Central District.—Petty repairs and alterations were carried out at the *Sewai-Madhopur* and *Uniara* dispensaries.

Western District.—The inspection bungalow and outhouses at *Bhairon Sagar*, *Chandsen*, are nearly completed, and the latter have been used as offices for the Western District. Trees have also been planted round the bungalow.

Two muhafiz quarters still remain to be built here.

III.—ROADS.

Appendix C gives a list of all the roads in the State with the particulars of each.

Roads in the City and Environs.—Extensive renewals have been carried out during the year as under :—

Chaura Rasta—

Kunkur collected...	...	...	...	39,299 c. ft.
„ consolidated	...	...	...	1,650' \times 47½'
				850' \times 23½'

Khatipura Road from railway level-crossing to Amanisha nullah—

Kunkur collected	...	...	...	11,602 c.ft.
„ consolidated	...	...	...	4,283' \times 12'

Khatipura Road to the kothi of H. H. the Maharaja, filling cart ruts and thorough repairs—

Kunkur collected	...	...	... 5,761 c. ft.
„ consolidated	...	...	... 35,251 sq. ft.

Tripolia Chauk—

Kunkur collected	...	...	... 15,689 c. ft.
„ consolidated	...	...	... 35,800 sq. ft.

Junter Lane—Deorhi—

Kunkur collected	...	...	... 10,956 c. ft.
„ consolidated	...	...	... 800' × 35' (average)

Zenani Deorhi Road—

Kunkur collected	...	...	... 3,739 c. ft.
„ consolidated	...	...	... 8,450 sq. ft.

Road round City Tanks—In the Amber and Manak Chauks—

Kunkur collected	...	...	... 48,637 c. ft.
„ consolidated	...	...	... 123,400 sq. ft.

Purkotas of the Sanganeer, Ajmere and Chandpole Gates of the City—

Kunkur collected	...	...	... 4,405 c. ft.
„ consolidated	...	...	... 10,400 sq. ft.

Buggi Khana and Theatre Road—

Kunkur collected	...	...	... 11,261 c. ft.
„ consolidated	...	...	... 1,564' × 12' section from

Moti Dungri Road—

Kunkur collected	...	...	... 40,028 c. ft.
„ consolidated	...	...	... 8,002' × 12'

Road to Burning Ghats (Masnn Road)—

Kunkur collected	...	...	... 35,698 c. ft.
„ consolidated	...	...	... 8,500' × 12'

Pumping Station Road—

Kunkur collected	...	...	... 28,642 c. ft.
„ consolidated	...	...	... 7,300' × 12' wide.

Amber Road.—A length of 5,134 ft. in the 2nd mile and 3,780 ft. in the 3rd mile have been renewed with a fresh layer of kunkur 12 ft. wide.

The usual permanent repairing gangs have maintained the roads in good order, special extra gangs being put on in addition during the rains.

District Roads.

Jaipur-Tonk Road.—Miles 6, 7 (2nd half), 8 (1st half), 14, 16, 20, 30, 34, 40 (1st half), 44 and 46 (1st half) have been renewed with a fresh layer of kunkur $4\frac{1}{2}$ inches thick and 12 feet wide, and the earthwork made up in the paties.

Between miles 4 and 8 and on the branch road to Jagatpura Station at Sanganeer, the shafts of ten small wells have been completed to save the cost of annual clearing, and these wells now contain 8 to 10 ft. of water, and have proved of great use both to travellers and for road repairs.

Mandawar-Kerauli Road.—Runs from Hindaun Road Station through Mahwa and Hindaun to the Kerauli border.

The bazar road at Mandawar, and miles 24, 33, 34, 38, 39, 40, 41 and 43 are being renewed, and the consolidation in miles 1, 16, 21, 22, 27, 35, 36, 37 and 42, 1st half 38, and second halves 25, 33 and 34 completed. Many accumulated arrears have thus been cleared off, but the road still requires much renewal in the first ten miles, and this will be carried out this year.

The road crossings over the Banganga and Gambhir rivers have been maintained as usual by laying stone slabs end to end over the heavy sand to take the cart wheel tracks, the slabs being removed during the rains and relaid immediately afterwards.

E^{ast} Road, from Jaipur City to the Bharatpur border.—Miles 8, 15, 22, 23, 26, 52, 58, and 76 are being renewed, and work has also been completed in miles 4, 5, 6, 8 and 64, also 1st halves 22 and 33 and second halves of 23, 52 and 58, together with a portion of mile 25.

A new road Chauki has been built in mile 22 at Semla for the use of the Munshi and gang in charge of repairs.

Ajmere Road.—From Jaipur City to the Kishengarh border, 52 miles.

A new layer of kunkur has been rammed in miles 6, 8, 10, 11, 18 and 23 in full and in mile 41 in part.

Owing to the hard nature of the kunkur available for this road, the tendency is for the road to wear into deep cart ruts. It is economical therefore merely to fill these ruts up, instead of going to the expense of a full new layer of kunkur. The cart ruts have thus been filled up in miles 22, 25, 27, 28, 29, 30, 35, 38, 39, 40, 42, 43, 44 and 45.

Repairs in miles 17 to 22 have been greatly delayed by some difficulties over kunkur completed and hoped that these will shortly be settled.

New *Muh* done are the complete repairs of all the bridges and culverts, the consolidation of the road-crossing at the Bandi river and some petty items at the rest houses.

Link roads.—Link roads from the Agra road to *Jhir* and *Jatwara* stations on the R. M. Railway have been completed with metalling 10 ft. wide.

The Jhir road and branch aggregate 4,593 ft. in length and the Jatwara road is 2,750 ft. long.

On the *Naila road* miles 9 and 11 have been consolidated with a fresh layer of kunkur.

At *Chaksu*, the road linking the Jaipur-Tonk Road to the station on the Jaipur Sewai-Madhopur Railway, 2½ miles in length, has been entirely completed.

On the *fair weather roads* metalling 10 ft. wide has been done or is in progress in miles 7, 10, 12, 15, 16, 17, 22 and 23, where the *Dausa Sewai-Madhopur road* goes through heavy sand. The Chauki at Nangal, mile 11, has been roofed with tiles and the thatch renewed.

The remaining work in consolidating the nullah crossings on the *Kothun-Lalsote road* with kunkur has been completed.

Niraina-Muljura Road.—This road, which was made in the famine of 1899-1900, has now been completely finished off. Length 38.63 miles.

The road has also been metalled at twelve nullah crossings, and two small culverts built over irrigation ducts.

The road has been maintained in good order.

The total cost to completion has been Rs. 9,569-3-0 or about Rs. 250 per mile.

Deoli-Rajmahal Road.—The sandy portions of this road and important nullah crossings have been metalled with kunkur and the road maintained.

Tonk-Deoli Road.—This road within the Jaipur boundaries aggregates 16 miles, and has been put into good order. It is kutcha throughout.

IV.—IRRIGATION.

General.—The Durbar has always taken especial interest in this branch of Public Works, and the progress has been well maintained.

The number of irrigation works in the State, completed or in progress and at present in charge of this department, is two hundred, and the *total expenditure* on these, during the past year, has been Rs.2,14,398-12-10.

The revenue from these works, owing to deficient rainfall, averaging 17·62 inches only in 1902, has been Rs.2,75,052-3, the details of which may be found in Appendix F.

The rainfall in the present year 1903 has been heavier in the Eastern Districts, but in the Western Districts, where the largest tanks are situated, it has, although timely and fairly well distributed, been generally light and not favourable for filling tanks. The revenue in 1903-04 is not therefore expected to be much in excess of the present year.

Up to date the *total expenditure* on irrigation works by the State through this department from 1868 up to August 31st, 1903, has been Rs.65,12,061, and the total estimated returns Rs.54,84,589.

The details of the revenue realized in 1903 are noted below :—

	Eastern Districts.	Western Districts.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
By water rate	52,313 7 0	17,910 14 6	70,251 5 6
„ share of produce	1,47,206 13 6	53,654 4 0	2,00,861 1 6
„ wells ... ..	...	...	...
„ miscellaneous	2,801 14 3	1,131 13 9	3,936 12 0
Total	2,02,325 2 9	72,727 0	2,75,052 3 0

In the Western Districts, B. Mooni Lal, zillahdar, who had done long and good service for 30 years since 1872, died on 20th October 1902, and his place has been filled by his son, B. Hira Lal, formerly naib-zillahdar, and who is well acquainted with the district.

In the Eastern Districts, Lala Nundkishore has held charge, and has been promoted to the post of senior zillahdar in place of B. Mooni Lal.

The whole staff have worked satisfactorily, and it is hoped that, when the new hands, who have also recently been appointed in the subordinate grades to replace the many vacancies which have lately occurred among the zillahdari staff, have acquired a better knowledge of their duties, that more efficient working will be secured.

The cost of supervision during the present season has been Rs.17,700-14-4 or Re.0-3-5 per bigah.

The rainfall, expenditure, and returns can be seen at a glance in the annexed diagram, which gives progressive results since the year 1872. The rainfall of each year naturally affects the returns of the year following. The average rainfall for the State from the monsoon of 1903 has been 22·65.

The following is a very brief note on the principal irrigation works which have been in progress during the year.

Eastern Districts.—These Districts are in charge of Lala Rup Chand, Assistant Engineer.

Crosthwaite Sagar (Ramgarh Irrigation Works).—An ornamental gateway with two chhatris and a covered passage-way have been built on the main dam.

Seven more cart bridges, fifteen culverts over ducts, two main and thirty-two minor crossing sluices, three well aqueducts and one new rajbaha sluice have been built.

Seven new rajbahas, aggregating 10.7 miles in length, have been dug.

Four new muhafiz quarters have been built at Bhanpur, Parasoli, Thakaran ki Dhani and Nagri, and six kutchra houses for the Zillahdari staff roofed with corrugated iron at Baori (4), Parasoli and Bhanpur. A pucca cook room has also been built at the inspection bungalow on the main dam.

Maroli Bund.—This is a very old work, originally built by Banjaras many years ago, the exact period being unknown. It consisted of a heavy masonry face wall 16 ft. thick at its base, faced with stone in lime and the whole backed with earth. Its height was 43 ft.

It had previously been repaired in 1888, but the bund immediately breached again in 1889, after standing safely through the monsoon of 1888.

It was decided to repair this breach once more, and as the possibility of the water overtopping the original work had been calculated on, it was decided to raise the old work 3 ft. more. Events fully justified these calculations. The first heavy fall of rain on the 19th July filled the tank to within 2 ft. of the waste weir level. This water was immediately run off down to Madho Sagar, and stored there. The tank thus again stood empty down to the outlet sluices or 17 feet above the nullah bed.

On August 8th a very heavy deluge of rain fell, the records showing amounts varying from 6 to 10½ inches, and nearly all falling between 2 a.m. and noon. The Maroli Bund again filled, and the water level rose rapidly to within 2 ft. of the top of the repaired bund, thus clearly demonstrating that the original work would have been overtopped.

The waste weir 50 ft. long on rock was then discharging 8 ft. deep, an equivalent of 3,500 c. ft. per second.

Water then began to find its way through the old masonry face wall, and commenced to wash away the earth backing. Deprived of the support of this earth, this face wall then gave way, and the bund, with 43 ft. of water in it, burst.

The whole cause of the breach was the inferior work in the older portion of the bund. The new portion of the work, consisting of a masonry corewall, with an earthen slope on the water side, and backed with rubblestone, stood well, until the breach occurred, when nearly the whole was carried away.

The case is interesting as showing what extremes have to be calculated for if all contingencies are to be provided for. The catchment of the Maroli Bund is only 15 square miles, all hard stony ground and hilly, and it is calculated that the run off during the whole season, as gauged at Moran Sagar in the same range of hills, has been 7.95 inches out of a total registered of 18.69 inches or 42.50 per cent.

During the particular downpour which breached the tank, which is estimated at anything between 6 and 10½ inches, about 140 million cubic feet came into the tank and above its full capacity, which, exclusive of 3,500 cubic feet of water discharging over the waste weir, is equivalent to a run off of 4 inches per square mile of catchment in 10 hours, or three-fifths of an inch per square mile per hour. *A*

It is questionable whether the water would eventually have overtopped the bund, though it had risen to within 2 ft. of the top of the masonry core wall when the bund breached, as a discharge of 3,500 c. ft. per second from the waste weir is equivalent to 12½ million c. ft. per hour or 125 million c. ft. in 10 hours, which is equivalent to 8½ million c. ft.

run off per square mile of this catchment in 10 hours or nearly $3\frac{1}{2}$ inches run off per square mile per 10 hours or $\frac{1}{2}$ inch per square mile per hour in addition to four inches more already run off and contained in the tank when it burst.

These figures are so remarkable that it is considered desirable to put them on record.

They seem to show that in this case the waste weir, to be safe, should provide for a run off of not less than $\frac{3}{4}$ inch per square mile per hour, and even this is likely to be rather under than over the mark.

The enormous quantity of water which is thus available for storage from these hills makes it worth while to expend a considerable sum in securing it, and fresh proposals for practically reconstructing the whole dam are being drawn up.

It may be interesting to add that at Moran Sagar, in the same hills, the tank constructed there in 1878, some 25 years ago, which had been raised 2 ft. last year, filled to this height, and 2 ft. of water also passed over its raised waste weir level, a higher flood than has yet been recorded there.

At Binouri, in the same district, the tank filled full and overflowed 5 ft. deep, bursting in its upper portion, being a higher flood than has been recorded since the tank was completed in 1895. This is enough water to fill the tank full twice over.

Mudho Sagar, Geonoli.—This tank was completed in 1886 and the Maroli Bund was constructed to help to fill it, as its capacity is greater than its supply.

Its eastern canal is being extended and improved. 16 new sluices have been built. The difficulty here is to prevent the canals silting up in the heavy sand, and it is hoped that the measures now being taken will enable irrigation to be carried on without hindrance in future.

The water will be run along the eastern canal for $5\frac{1}{2}$ miles, when the water will descend the course of a nullah bed to a point where the water can be conveniently distributed above Sikrai village.

Gaitoluo Tank.—This tank has been raised 2 ft., as water is now led into it from the Ramgarh canal during the rains. It has been strengthened, and has filled full this year. The water is being conserved, as owing to the long series of years of drought, the town of Dausa has suffered severely for want of water even for drinking purposes, and this tank helps to supply this want.

Moran Sagar.—The corewall has been raised 2 ft. owing to the high water line having also been raised. This year's flood has already justified this action. A number of new sluices and two new ducts to Kharola and Sahejpura have been dug.

Sainthal Sagar.—So much water was lost by running it down to Sinoli that it was decided to dig two new canals to irrigate lands in the immediate vicinity of the tank.

The northern canal is 4 miles long and 10 ft. wide, with six miles of rajbahs 3 ft. wide to irrigate the Sainthal lands.

The southern canal is $5\frac{1}{2}$ miles long 10 ft. wide, and its rajbahs and masonry works are in progress. It extends to Bapi village on the banks of the Bangunga.

Other minor works at Raiawala, Khurr, Barika Thor, Sanoli, Goojar Thikria, Chor Malarna, Ramawala, Binouri Supply Cut, Barial, Bannawas, Baragaon, Banyawala Tank and Jalsein are fully described in the Assistant Engineer's report.

Irrigation Works, Repairs.—Among the principal works done may be noted a new ramp at the superpassage at Bhonawas village, near Boochara, new water gauges at Raiawala, Sinoli, Khurr, Nimla, Bijey Sagar, Baswah, Ram Sagar, and Ramawala Bunds, and the usual petty repairs and silt clearance of canals.

The small bunds at Haripura, Nimolao and Bijey Sagar Baswah breached in the rains but were immediately repaired.

Central Division.—This division is in charge of Babu K. N. Mukerji, Assistant Engineer.

Bund Sheodoongri.—This work is now quite completed. It filled 19 ft. this year, or 6 ft. over the sluice bed. Owing to the extremely sandy nature of the soil in its vicinity much loss at present occurs by absorption in the tank bed, but as the subsoil becomes saturated, this will diminish in a few years' time. The wells in its vicinity are already benefited. At Halolao tank, which has been repaired in connection with this project, the effects of the percolation from the water stored in the tank are most marked, and the benefit to the cultivators very great indeed. Much land, which had lain waste for years, is now rapidly being again brought under cultivation.

The principal works done this year are a bridge on the Tonk Road at mile 25th, 5 sluices, 11 well *dhora*s over canals and a muhafiz quarter at Chaksu.

Bund Bassi.—This work is now quite completed. It has not filled yet, the rainfall this year having been somewhat uncertain and capricious, especially in some portions of the Central and Western districts in the State.

Katli River Inundation Cut.—It was not found possible to carry out the works recommended as necessary to complete this work this year. The rainfall in the northern part of the State was generally good, and several good floods came down the Katli river.

About 2 ft. of water passed down the cut.

The training spur in the riverbed was breached in 500 ft. of its length, and it is probable that, if this work is completed and a weir built, that this spur will have to be reconstructed lower down and at right angles to the general direction of flow in the river.

The whole difficulty in dealing with this case is to allow a certain proportion of the flood water to pass down to the Bikaneer State.

It would be a comparatively simple and inexpensive matter to divert the whole river to its original course in the Jaipur State.

So far all efforts have been nullified by the heavy deposition of silt in the inundation cut.

General Repairs.—Among the chief items of work done are the completion of the raising of Chandlai tank and the extension of its sluice, the provision of two new falls in the Sanganeer Chandlai Supply Cut, the crests of two existing falls being lowered to prevent loss of water by absorption, and the construction of a well aqueduct in mile 1, Amanisha new supply cut. This last mentioned cut was of great utility in filling the Chandlai Tank; a maximum depth of some 4 ft. of water passed down it, while the masonry weir 100 ft. long at the river flowed 2 feet deep.

The drainage area above this weir is 21 square miles, of which about half is fairly hard sandy clay and about half is heavy sand.

This discharge is equivalent to 1,000 c. ft. per second (as there is a clear overfall at the weir) which gives $43\frac{1}{4}$ million c. ft. in 12 hours, and adding 180 c. ft. per second discharge, in the cut or $7\frac{3}{4}$ millions in 12 hours gives a total of 51 million c. ft. discharged in 12 hours or nearly $2\frac{1}{4}$ million c. ft. per square mile in 12 hours or rather less than one inch run off. The rainfall measured at Jaipur on that day, August 8th, being about $4\frac{1}{2}$ inches in 12 hours (5 A. M. to 5 P. M.)

For a catchment of such a nature therefore a run off of 2 inches in 24 hours or $\frac{1}{12}$ th inch per hour is likely to be the maximum under all ordinary circumstances, or, say, 5 million c. ft. from each square mile per day at most.

Irrigation works near Jaipur City.—The city overseer, Lala Nathu Lal, looks after these.

A pucca masonry weir, known as *Santokh Sagar*, which had formerly been breached by a flood, was repaired at a cost of Rs. 182-6-6. This weir is situated below the outlet of the Raja Mull ka Talao or old City Tank, the escape from which was closed up last year. It is useful for irrigation by "denklies," and increases percolation in the surrounding wells.

The zamindars' wells in this vicinity have also been much benefited by the storing of water in the city tank above mentioned, much of the bed of which was cultivated last year, and brought in a handsome return in rent per bigah.

A bund at *Luldoongri*, which serves a similar purpose in increasing percolation, and which is situated near the *gutta*, was also thoroughly repaired and strengthened.

The Amber tanks and Khonagore are also in charge of the Overseer, and Bhao Sagar and Ram Sagar have filled well this year.

The old *Koond* at the *Jhalana palace* has been completely emptied of water and 2 ft. of silt removed. When this operation was attempted some years before the springs were so strong as to render it impossible to clear the water. The drought has now rendered the operation comparatively easy.

Western and South-western Districts.—These districts are in charge of Lala Indra Sahai, Assistant Engineer, who has been busily employed throughout the year, and a large number of minor works, long outstanding, have been also completed. The most important works are described below :—

In the South-western Districts.

Bhairon Sagar, Chandsen.—A central drift was dug along both canals to enable them to be used this season in case of necessity.

The earthwork of the main dam and the remaining portions of its corewall, together with the south low level outlet sluice, were in progress, and are nearly completed. Expenditure to date Rs. 1,40,670-13-8.

Kali Doongri Tank—This new tank is well in hand, and the earthwork of all but the central portion has been completed.

Lampra Tank and Supply Cut have been practically completed.

Hathapura Tank—This work has been quite completed. It filled and overflowed this year. Cost to completion Rs. 12,201-0-4.

Other works include the completion of corewalls in Roopnailly, Kerli and Baneria tanks, the raising of Gopipura tank 2 ft., the raising of Garera bund 2 ft. with a new high level sluice, the raising of Kalumda tank 1 ft. and a new supply cut to Rampura tank.

At Ghati, where the hill drainage used to block the North Tori Canal with silt, two nullahs have been bunded up at a cost of Rs. 1,194-3-3. It is hoped that the water will be absorbed into the heavy sand, and thus prevent this damage to the canal in future.

At Lamba Hari Singh a 10 ft. belt of pitching has been laid on the inner slope to prevent cutting. A high level sluice 4 ft. wide has been built, the canals widened and cleared, and masonry works extended accordingly where necessary.

In the Western Districts the principal work in progress has been the *Chaparwarra Supply Cut* from the Mashri River. The works here done this year include a head regulator at the Mashri and a masonry escape at Kachnarra. The total expenditure to date is Rs. 53,019-10-1. The supply cut, which is 30 ft. wide, has done good service this year in supplying water to Chaparwarra Sagar, which, owing to the scanty rainfall in that district, 13½ inches only, would otherwise have remained nearly empty.

Hingonia Weir.—The masonry weir here is to be converted into a storage reservoir. There is a fine basin, and 350 million c. ft. of water will be stored. 1,300 ft. of corewall have been built up to present H. W. line.

In the supply cut from the weir to Sohadra Tank, a masonry regulator with equilibrium gates has been built.

The new tanks at Churu, Agar Sagar, Datoli, Kala Talao Govindi and Dhamalia alluded to in last year's reports have been completed.

Other minor works done include new 1 ft. sluices at Kishenpura Tank and Kala Talao Tank at Niraina, and complete repairs to Jetpura Tank and old Ram Sagar Churu. Thirteen wells near Toda Rai Singh and Mozabad, deepened and repaired, and the new well at Saitiwas finally completed.

Repairs to existing Irrigation Works.—On the *Tori Sagar Canals* many permanent works were carried out to facilitate their working and maintenance.

These consist of eight inlets, four crossing sluices, a syphon at Ratwarra, equilibrium shutters to thirteen 4 ft. sluices, a 100 ft. escape at Thalanda, and a slab footpath at Rampura escape.

The bridges at either side of the escape on the canal below the waste weir of Tori Sagar have been fitted with equilibrium shutters, as has also the head works of the central low level canal.

109 small side sluices have been provided with locking bars.

Mushi River Supply Cut to Ganwar.—The following works have been carried out:—One side sluice, one escape with equilibrium gates, six well ducts and a combined syphon and footbridge.

Panwar Tank.—Canals have been widened where necessary and cleared. A pucca escape on the canal, formerly damaged by the water escaping from the tank, has been rebuilt with grooved pillars, the crest being kept at the bed level of the canal to prevent its being silted up.

Other works include the clearing and widening of the canals at Thaonla, Nasrida, Ram Sagar Ganwar, Dhund and Saitiwas, and new ducts at Mahadeopura, Lamba and Baneria.

Chaparwarra Canal.—Three new inlets have been built on the canal, and a bridge with equilibrium gates at mile 25 $\frac{3}{4}$ to fill the Churu Sagar, the new tank.

Locking bars have been provided to a number of sluices, and 50 ft. of corewall built to prevent the canal breaching at mile 3 $\frac{1}{2}$.

Karigh Canal and the Akeypura Branch.—Three new cart bridges have been built, and 35 side sluices provided with tilting shutters and locking arrangements.

Nine new 4 ft. outlet sluices have been built.

Neota Canals and Supply Cut.—These have been put in thorough order. The sandy nature of the soil renders frequent clearance necessary, but some permanent works have now been added, which will, it is hoped, reduce the expenses in annual clearance.

100 ft. of corewall have been built where the L. L. south canal used to breach, and the wings of the II. L. north canal aqueduct also lengthened to prevent breaches when the canal is running. In the supply cut a new cart bridge has been built in mile 2 near Sanganeer, and other petty repairs executed.

Other minor works include an aqueduct 40 ft. long at Kala Talao Naraina, three well ducts and a bridge on Dhobolao canal, a culvert at Bhamholao Ganwar, and earthen pipe sluices and two crossing sluices at Naya Sagar, Mozamabad.

Sheo Sagar, Lawa.—At the request of the Raja of Lawa, work on this tank was supervised.

Surveys of new projects.—A large number of new sites for tanks were surveyed and estimated this year. The opinions of the State Revenue officers will also be obtained on these in due course, and they will then be ready to be taken up whenever the Durbar wish.

Hitherto a certain amount of new work has always been taken up every year in addition to the maintenance of the old works, and it is therefore necessary to have an efficient programme always ready. It is hoped eventually to store every drop of water in the State, but there is much still left to be done. Quite half the State still remains to be dealt with.

The following is a list of the new projects surveyed :—Mahesra, Lakhanpur, Jamraoli, Lowarra, Bokriawas, Kudera, Jhampri, Lakolai, Dipru, Mor, Simeli, Baneria, Chalgawas, Kalidoongri, Ghatti (2), Gaiji weir and Jaoli, that is 17 in all, of which all but Lakhanpur and Jaoli are strongly recommended. The Ghatti bunds have been finished as already noted. Lakolai and Gaiji weir concern Jagirdars only, while Kalidoongri is in progress.

The remaining 13 can be taken up at any time, in addition to a large number of projects previously prepared and ready to be taken up at any time.

Surveys of existing works.—In addition to the above work seventeen surveys have been carried out in connection with existing works, and fifty-four existing tanks have been contoured to ascertain and check the duty done by each in irrigation.

This work of contouring is nearly finished and will prove a very useful check on the efficiency of the Abpashi Department.

Bundi ki Gotra Project.—This is a project for a large storage reservoir in the Bundi State. As the high water level of the tank as proposed would submerge a portion of land in Jaipur territory, and 50 square miles of its catchment area lies within the Jaipur State, a report was drawn up on the subject at the request of the Durbar.

An examination was also made at the same time of the whole 50 square miles of the Awan district of Uniara in the Jaipur State concerned in the case, and no less than seven possible sites for tanks were selected within this area for investigation as follows :—

At Raj Kote two, near Awan two, and at Sirdarpura, Bisanpura and Gotra one site at each place.

It is hoped that the Uniara Thikanah will eventually take up the survey of these projects.

As regards the land in the vicinity of Gotra village in Jaipur, a good deal of valuable land will be submerged, and it has been recommended that the high water line of the proposed Bundi tank should be reduced 7 ft, when, although certain land in the Jaipur State would still be submerged at high water line, yet nothing of value would be damaged, and this State should also retain the right to irrigate freely from the Bundi tank by *advanis*, in which case the construction of the tank in Bundi should prove a source of some profit and advantage to the Jaipur State.

The right to construct tanks in the Awan district should not be surrendered, nor is it needful, with a reduced high water line, to count on the run off from this area in order to fill the proposed Bundi tank.

V.—MISCELLANEOUS PUBLIC IMPROVEMENTS.

Ram Newas Gardens.—These public gardens are under the supervision of Lala Nathu Lal, overseer, assisted in the Zoological section by Ghoolam Hosein, darogha.

The services of the head mali, Ramjee Lal, and four other malis were lent for the Delhi Durbar Coronation camp, and the men were well reported on.

Expenditure.—The cost of maintenance has been :—

Establishment Rs.4,592-2-9 ; Watering Rs.7,706-6-1 ; Miscellaneous Rs.1,426-9-5 ; Grand total Rs.13,725-2-3, to which must be added additional pumping expenses connected with the steam pump, which was fitted in the deepest well to supplement the diminished supply of water due to the past seven years of drought, which has seriously affected the wells.

In addition to the above expenditure, special works cost Rs.5,598-2-11, chiefly spent in renewing the roads, arranging for a well water supply to replace the tap water now cut off, and in the maintenance of the buildings in the Zoological section.

Revenue.—The total revenue from the gardens has been Rs.1,571-8-0, which does not include the plants and shrubs issued free to other Raj gardens. 1,392 bouquets, 453 baskets of cut flowers, 2,261 Dalis of Vegetables, 1,784 Plants and Shrubs and 47 Roses were issued from the gardens, while 1,250 pots of flowers and shrubs were sent on loan to Delhi to the Coronation camp.

The seeds were purchased from Ernst Benary, of Erfurt in Germany, as usual, and were quite satisfactory.

Apprentices.—22 mali boys were under training in gardening and Hindi during the year. The training includes physical drill and gymnastics.

Flower Show.—The 23rd Annual Flower Show was held on February 27th, and in spite of the previous drought, was fairly successful. Rs. 241 were distributed in prizes, which were kindly given away by Mr. H. V. Cobb, I.C.S., Resident.

Many others also gave most valuable assistance in judging the exhibits.

Zoological Section.—The cost of maintenance has been :—

Establishment Rs. 1,583-8-4; Food Expenses Rs. 3,864-6-3; Petty Works and repairs Rs.151-14-4; Contingencies Rs.177-13-2; grand total Rs.10,777-10-1.

The number of birds and animals in the gardens on August 31st, 1903, was 2,000.

Three Hog deer, 1 Spotted deer, 2 Sambhur, 1 Mouse deer and 1 Marmoset monkey, besides a number of pigeons, ducks and fowls, etc. were born in the gardens during the year.

City Conservancy Tramway.—The portable tramway, depôts and plant have all been kept in good order, and the tubs of 40 wagons, which had been eaten away by the corrosive action of the foul earth, were renewed with thicker iron sheets $\frac{1}{8}$ th inch thick, and coal tarred to protect the surface of the iron.

84,496 wagon loads of foul earth and rubbish, equivalent to 675,968 c. ft., and 3,395 dead animals, were removed outside the city.

16,996 cart loads of refuse brought to the depôts by the municipal carts were burnt in the furnaces.

Clean fresh sand has been brought in to meet the requirements of the urinals, latrines and tiger cages.

City Water Supply.—The pumping arrangements have been in charge of Mr. Dominy, Engineer, who has furnished the statistics noted below.

He has been assisted by Mr. E. Baker, Assistant Engineer.

The water distribution is in charge of M. Nathu Lal, Overseer, City Works.

The main dam again dried up in May, but a supply of water was continued from the leakage water, supplemented by the two wells in the bed of the tank, and an average of some 400,000 gallons daily were thus provided for consumption within the city, where the wells are brackish.

The rains were late and the first heavy shower did not fall until July 11th, but the total rainfall has been almost up to the normal, and the water level has risen to 29 feet 6 inches on the gauge, of which about 16 feet is silt, so that a supply of 13 feet 6 inches of water is available for the coming year, which it is hoped will suffice, at the present rate of consumption, to give water to the people within the city walls.

Outside the city the wells contain sweet water, and the necessity for a tap supply is not so important.

Owing to the deficient rainfall last year, and the insufficient amount of water in the tank, no new taps were erected. There are at present 1,232 taps erected in the city.

Certain private taps were opened from October to April, but not more than one in each house, and all taps were only opened between specified hours.

The revenue from private taps has been Rs. 1,101, and the average monthly cost of supervision Rs. 115.

Water raised.

The total quantity of water pumped during the past year into the reservoirs 110 ft. high was as follows:—

			Revolutions.	Gallons.
By old engines	...	...	4,940,156	133,384,212
„ well engine	...	...	1,033,065	15,495,975
Total gallons				148,880,187

The daily average consumption of water for the last three years has been:—

					Gallons.
1901	...	...	...	...	898,972
1902	...	...	...	...	327,815
1903	...	...	...	...	407,890

The daily consumption of water per head, taking the population at 160,000, has been 2.54 gallons.

The cost of raising the above quantity of water has been:—

By the old engines Rs. 25,791-2-5 = 3.09 annas per 1,000 gallons.

„ „ well engine „ 3,137-4-4 = 3.28 „ „ 1,000 „

Total ... Rs. 28,928-6-9.

Detail of charges.

				Rs.	a.	p.
Labour on all engines combined	...	...	...	10,408	12	9
Fuel	...	...	...	17,745	3	5
Petty materials	...	...	...	774	6	7
GRAND TOTAL				28,928	6	9

Fuel consumed.

Coal 18,501 mds. 12 srs.; wood 6,307 mds.

The Cost of Fuel.

For the first six months of the year coal 14 annas per maund.

„ second „ „ „ 12 annas 6 pies per maund.

For the year—wood Rs. 32 per 100 maunds.

			Rs.	a.	p.
Filter Bed.—Cost of cleaning the filter bed has been	...	...	13	6	6
„ „ 1,836 c.ft. sand	...	...	30	13	6
„ new sand, 970 c ft.	...	...	97	15	6
Total	...	...	142	3	6

Service Reservoirs.—Cost of cleaning and repairs to both tanks, which were cracked slightly in several places, Rs. 70-0-10.

Water Meters.—Cost of cleaning water meters, Rs. 7-14-6.

A small Worthington pump was floated on some casks in one of the new wells north of the bund to lift water from the wells 10 ft. high into the outlet well to augment the supply in

small reservoirs after the large storage reservoirs had dried up; the pump worked 1,359 hours and pumped 6,898,977 gallons at a total cost of Rs.972-2-5½, being 2 annas 3 pies per 1,000 gallons.

Repairs to Engines and Boilers.

Old Engines Nos. 1, 2, 3 & 4.—1 new pair of eccentric straps to air pump of No. 3 engine. Engine cylinders Nos. 1, 2 & 4 have been taken out, valve faces planed up true on shaping machine, new slide and expansion valves fitted, new rods, bushes and glands, and all working parts renewed and fitted up again. Several condenser tubes replaced by new ones.

The six pumps to Nos. 1 and 2 engines have been taken out, rams re-turned, and new neck bushes to the six rods for same fitted.

One wrought iron coupling has been fitted to No. 4 engine crank shaft, to replace cast iron one which had worked loose.

New engine.—This engine has been worked weekly for 15 minutes only, to keep it clean, oiled and in working order.

Root's boiler.—One brass spindle and nut cast and fitted to 6" steam valve on No. 1 boiler.

One new brass valve and seating cast and fitted to 6" stop valve between Root's and Lancashire boilers.

All cast iron caps taken off, and new joints made throughout, to well engine boiler as the old joints were always leaking.

Lancashire Boilers.—These boilers have only worked five days during the past year; they have been kept dry and in order, and are ready for immediate use when required.

Well Engine.—One new brass spindle and valve cast and fitted to engine stop valve.

Repairs done in Workshop, Amanisha.

Two split eccentric sheaves for old engine air pumps cast and fitted up for stock, and shafting extended to drive grindstone outside workshop at Amanisha.

One sheet iron punt for removing weeds from small bund.

One new spindle screw forged and fitted up for hand drilling machine at Mandawar.

Fourteen new brass clacks for hydraulic valves for Mandawar Cotton Press.

Twenty-three irrigation sluice valve spindles with heads, nuts, and holding down bolts complete for Superintending Engineer, P. W. D., Jaipur.

Two cast iron press doors repaired for Jaipur Cotton Press.

Two wrought iron keys machined for end plate for Mandawar Cotton Press.

Sixteen brass clacks for hydraulic valves for Jaipur Cotton Press.

Three bottom ram packing rings bored out and bushed, one for Jaipur and two for Mandawar press.

One hand drilling machine fitted up with new working parts throughout for Jaipur Transport Corps.

One wrought iron Tee forged and machined for Jaipur Cotton Press.

One cast iron guide plate patched with ½" steel plates and fitted up for Jaipur Cotton Press.

Two sluice valve spindles with brass nuts, head plates, rods, etc. complete for Superintending Engineer, P. W. D., Jaipur.

One cast iron prop for Jaipur Cotton Press taken out, wrought iron ring fitted to foot of same to stop the prop splitting at bottom end.

One brass feed valve repaired and fitted with new $\frac{3}{4}$ " studs at each end for Mandawar boiler.

Four eccentric rod jaws forged and fitted up for old engines for stock.

One set of water gauge fittings repaired, and new plugs fitted, for boiler, Jaipur Cotton Press.

Fourteen brass spindles and nuts cast and fitted to suction and delivery valves, old engines, for stock.

Five expansion bushes cast and machined for old engines for stock.

Two brass packing nuts cast and machined for pumps, Jaipur Cotton Press.

Overhauled Worthington pump, cast and fitted two new pistons to the pumps of same.

Establishment.

Mr. Dominy reports that the establishment has given every satisfaction.

There has been no hitch of any kind and all have worked well.

Mr. Dominy was on sick leave during May and June, when all the works in connection with the Gas Works, Water Works and Cotton Presses were superintended by Mr. E. Baker, his Assistant.

MONTHLY REPORT OF WORKING OLD ENGINE FOR THE YEAR FROM 1ST SEPTEMBER 1902 TO 31ST AUGUST 1903.

15

Months.	Hours working.	No. of strokes.	Gallons pumped.	Wood.	Amount.	Coal.	Amount.	Labour.	Sundries.	Total.
					Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
September ...	255	293,496	7,924,392	395	126 6 5	1,034	904 12 0	848 5 6	50 9 3	1,930 1 2
October ...	397	461,713	12,466,251	430	137 9 7	1,482	1,296 12 0	829 7 6	69 0 3	2,332 13 4
November ...	392	447,672	12,087,144	460	147 3 2	1,440	1,260 0 0	841 13 0	66 5 2	2,315 5 4
December ...	389	457,364	12,348,828	475	152 0 0	1,464	1,281 0 0	848 1 9	63 9 0	2,344 10 9
January ...	380	444,695	12,006,765	750	240 0 0	1,304	1,141 0 0	848 1 9	61 11 6	2,290 13 3
February ...	337	399,228	10,779,156	970	310 6 5	1,134	984 2 0	847 0 3	60 15 9	2,202 8 5
March ...	410	492,157	13,283,239	1,100	352 0 0	1,398	1,223 4 0	848 10 3	61 7 10	2,485 6 1
April ...	359	440,725	11,999,575	620	198 6 5	1,294	1,030 4 4	846 6 3	51 13 11	2,126 14 11
May ...	308	372,114	10,047,078	415	132 12 9	1,329	995 1 6	846 9 0	51 3 9	2,025 11 0
June ...	228	278,650	7,523,550	340	108 12 10	977	738 0 2	844 13 6	37 5 0	1,728 15 6
July ...	290	353,147	9,534,969	385	123 3 3	1,040	812 8 0	818 0 6	52 3 0	1,835 14 9
August ...	408½	499,195	13,478,265	478	150 11 0	1,420	1,109 12 3	849 0 0	62 8 3	2,171 15 11
Total ...	4,153½	4,940,156	133,384,212	5,818	2,179 7 10	15,316	12,776 8 3	10,146 5 3	638 1½ 1	25,791 2 5

MONTHLY REPORT OF WORKING WELL ENGINE FOR THE YEAR FROM 1st SEPTEMBER 1902 TO 31st AUGUST 1903.

Months.	Hours working.	Number of strokes.	Gallons pumped.	Wood.	Amount.	Conl.	Amount.	Sundries.	Labour.	Total.
					Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
September	120½	55,033	825,495	36	11 8 4	267	233 10 0	6 0 3	28 0 3	279 2 10
October	67½	47,280	709,200	21	6 11 6	129	112 14 0	2 13 0	29 0 0	151 6 6
November	128	85,112	1,276,680	39	12 7 8	248	217 0 0	6 10 0	26 13 3	262 14 11
December	22	16,002	240,030	6	1 14 9	48	42 0 0	0 15 7	14 14 6	59 12 10
January	9½	6,197	92,955	3	0 15 3	19	16 10 0	0 5 4	5 0 0	22 14 7
February	82½	54,755	821,325	24	7 10 10	162	141 12 0	3 2 0	11 12 6	164 5 4
March	202	146,197	2,192,955	66	21 2 0	432	378 0 0	10 0 3	29 0 0	438 2 3
April	243	156,446	2,346,690	75	24 0 0	472	413 0 0	13 15 3	29 0 0	479 15 3
May	245	157,987	2,369,805	75	24 0 0	506	374 3 8	13 15 3	29 0 0	441 2 11
June	255	164,169	2,462,535	78	24 15 4	495	385 15 0	16 13 10	29 0 0	456 12 2
July	209½	135,913	2,038,770	63	20 2 0	390	304 9 3	10 9 5	25 15 0	361 4 2
August	11½	7,969	119,535	3	0 15 3	17	13 2 0	0 5 4	5 0 0	19 6 7
Total	1,595½	1,033,065	15,495,975	489	156 7 5	3,185	2,632 11 11	85 9 6	262 7 6	3,137 4 4

Work done by the Engines is shown in the statements attached. The diagrams show the maximum and minimum heights of water in the reservoir and rainfall during the year and consumption of water.

Imperial Government Works.

Telegraph Office, Jaipur.—The signal room has been paved with red sandstone at a cost of Rs. 174-9-0. The whole building was also white and colour washed. Cost Rs. 127-0-3.

Post Office, Hindaun.—The outer walls have been raised for protection against robbery and the building whitewashed inside. Cost Rs. 143-9-6.

Post Office Mahwa.—This building has been coloured and whitewashed and plaster repaired. Cost Rs. 36-15-9.

The post offices at Jaipur and Mahwa are the property of the Government of India, while the building at Hindaun belongs to the State and is rented by Government.

The Albert Hall.—Repairs to the amount of Rs. 856-14-7 have been carried out, chiefly in renewing the frescoes, varnishing and general repairs. New felt covers have been provided over the skylights.

Church.—The church building and cemetery have been maintained in good order. The thatch of the church peon's hut has been repaired. All work was done at private expense as usual.

At the Roman Catholic chapel a wooden cylinder was sunk in the well at the expense of the Reverend Fathers.

Stone Cutters' Yard.—A certain number of stone cutters have been employed steadily throughout the year in both public and private work.

Cutstone work has been done in connection with the new escape at Churu Sagar, the supply cut to Sohadra, and irrigation works on the Tori Canals at Lamba Hari Singh, Bhairon Sagar and Kho Nagori.

Arrangements were made last year for sending special masons to Calcutta to replaster the pillars in the interior of Government House, in competition with Madras workers. Their work was satisfactorily reported on, and more men have again been sent this year to execute similar work. It is believed that these men will be greatly helped in obtaining this employment, as building work is somewhat slack in Jaipur City at present.

At the request of the Kishengarh State some tests of Silora and Bhankri slabs were made. Both classes of slabs exhibited great strength and durability, and there is little to choose between them in these respects. The Silora slabs are somewhat more workable.

In addition to the above work some nineteen works costing Rs. 2,971-2-8, to the order of private individuals, were in progress or completed during the year, among the principal of which may be mentioned marble altars for Cawnpore, Jubbulpore and Darjeeling, and a marble pulpit for Benares.

These works have sufficed to keep a trained staff of stone cutters available for any work required to be carried out.

Lime Manufacture.—Owing to the fact that no important building work is in progress near the city at present, the lime kilns have not been worked.

Such stone lime as was required for petty works and repairs has been procured from the lime kilns of the Imarat Department.

Kothi of His Highness the Maharaja at Agra.—This building is in charge of Babu Lachman Singh, Munarim.

A new upper spar for the flagstaff has been fitted to it.

Ice shop.—A supply of ice was procured daily from Messrs. John & Co., Agra, as usual, for sale in Jaipur. The price charged, *viz.* Re. 0-1-6 per seer only, just covers working expenses including all charges.

The shop was opened from 15th March to November 15th.

The average waste in transit was 18 maunds and 5 seers per cent., the maximum being 19 maunds and 27 seers per cent. in August, the minimum 15 maunds 4 seers per cent. in April 1903.

The average waste at the depôt in Jaipur was 9 maunds and 33 seers.

The total amount sold was 731 maunds 32½ seers.

The total expenditure Rs. 2,646-0-11 and total amount realized Rs. 2,936-10-3.

Dak Bungalows.—This *Jaipur* dâk bungalow is rented by Mr. Rustomji ; the roads inside the compound have been remettalled where necessary, and some petty repairs done.

In the districts a sweeper's hut has been built at *Pancholi*, and the thatch of the khansamah's and sweeper's house at *Mahwa* renewed.

At *Chaksu*, the bungalow has been white and colour washed, and the thatched roofs of the outhouses renewed.

At *Domeh* part of the bungalow is occupied by the police. The whole building has been repaired and whitewashed, and a road moharrir's quarters built in the compound, together with a small cook room for inspecting officials on tour.

Workshops.—During the past year 390 orders were carried out at a cost of Rs.6,108.

The following items may be enumerated among the rest:—

Almirah for surgical instruments 7' × 7' × 2'.

Candle brackets with clips for Delhi camp.

Camel trunks for tour.

Night-soil buckets for Mayo Hospital.

Galvanised iron pans for Mayo Hospital.

Wooden gates and overhead gear for raising sluices.

Repairs to the Portable Railway Plant.

Designs.—The following is a list of some of the designs, etc., made in the Drawing Office during the year:—

Chatris over the entrance gate of Ramgarh Irrigation Works.

Diagrams showing consolidation, etc. done on Agra, Naila, Hindoun and Kerowli and Lalsote roads.

Pucca chouki for 2 sowars and 2 horses at Bandarbhai, Khandar.

Mohafiz houses and rest tribars at Khir.

Sentry-box at Jail Hindoun.

Maroli Bund outlet sluice for Madho Sagar Supply Cut.

Designs in connection with the extension of the Eastern Canal, Madho Sagar.

Proposed head works, Katli Inundation Cut, Shaikhawati.

School Building at Hindoun.

Drawings in connection with the Jaipur Camp at the Delhi Coronation Durbar.

In addition to the above 284 drawings and tracings were executed during the year.

Gas Works.—The Gas Works is in charge of Mr. Dominy, assisted by Mr. Baker. Mr. Dominy's report is printed separately, and gives full particulars.

The working has been satisfactory. The cost of the gas production has been Rs.7-9-4 per thousand c. ft., or including all maintenance charges, Rs. 9-1-2.

The average number of jets lit daily was 841, and the average consumption of gas 2.02 c. ft. per hour.

The new gas holder has worked satisfactorily. Incandescent gas burners with mantles have been fitted at the Residency, and give satisfactory results. Each incandescent burner has 4 to 5 times the illuminating power of an ordinary burner, with a consumption of only about 50 per cent. more gas.

Special arrangements were made for gas illumination on the occasions of the visits of H. E. the Viceroy and of H. R. H. the Duke of Connaught, when special designs in gas jets were made and erected.

State Cotton Presses.—The working season has been a successful one. Babu Jadu Nath, Manager of the Jaipur Press, has submitted his report, which is printed separately, and gives all details. He also supervises the work at the Mandawar Press. Babu Jugbans Rai, Manager of the Mandawar Press, has been removed from his post for engaging in private speculation to the prejudice of the Durbar. Pending the appointment of a successor, Munshi Fateh Lall, head clerk of the Jaipur Press, carried on the work at Mandawar. The general results of working are as under :—

Jaipur Press.—19,326 bales were pressed. The cotton crop was injured by frost in January or more bales would have been pressed. Gross revenue Rs.59,543-3-0, net revenue Rs.24,835-10-11 or Rs.11.04 per cent. profit on the capital cost of the press.

Mandawar Press.—19,265 bales were pressed. Gross revenue Rs.44,897-7-6 and net revenue Rs.12,973-6-7, which gives a profit of Rs.10.94 per cent. on the capital cost of the press.

The engines and machinery were supervised by Mr. Dominy, assisted by Mr. Baker, and are in good order. One girder of Press No. II, Jaipur, broke, and was repaired by Mr. Dominy. The base of one of the rams at the Jaipur Press was cracked by the carelessness of one of the engine-men. It was taken out and a ring shrunk on and turned down, and is now again in use.

Three new press doors were made in Bombay and three high pressure distribution valve boxes from Ajmere, while the ram of the Mandawar Press was re-turned up in the Locomotive shops at Ajmere, as it had become slightly grooved on the surface.

No serious hitch occurred in working throughout the year.

Raj Imarat.—This is a separate branch of the P. W. D., and is in charge of Lala Chinan Lal, Darogha. His report is printed separately, and shows what a lot of useful work has been carried out by him during the past year.

In addition to the maintenance of buildings, the Darogha has multifarious duties in connection with the sale of Raj land, the rents of Raj shops and revenue on quarries, royalties, etc.

The Income during the past year has been Rs.52,442-13-7, chiefly from rent of shops, and Expenditure Rs.84,199-2-7, chiefly on repairs to buildings.

165 Estimates were framed and 155 Final Bills submitted, while Rs.4,889-5-4 in Savings were remitted to the Superintending Engineer's Office for payment into the Raj Treasury.

The Darogha reports well of his staff. One Sub-Overseer, B. Sarat Chuander Roy, formerly in charge of the temple works at Barsana, died.

The principal works carried out during the year were a Rath Khana building; very extensive repairs to the Residency Kothi and compound; repairs to Raj buildings in connection with the Viceregal visit; repairs to the City Walls; new wells at the Hathroi Kothi, in the Jainiwas Gardens, Topkhana Des and Bagh Vidiadhar; numerous repairs to temples and also to Raj offices and godowns and to the barracks of the troops, both infantry and cavalry.

The whole report is quite satisfactory.

Jaipur Sewai-Madhupur Railway.—The capital account of this railway was temporarily closed on August 31st, 1902, but the existing earthwork and buildings, which are standing completed, have been maintained in good order.

Some flourishing plantations of trees have been maintained in all the station yards.

The total Expenditure on Maintenance during the year has been Rs.2,930-9-2.

Journals.—The distances travelled on inspection by the Engineer officers during the past year are as under :—

			Road.	Rail.	Total miles.
Mr. C. E. Stotherd ...	...	...	990	880	1,870
Lala Rup Chand ...	...	...	1,454	758	2,212
Babu K. N. Mukerji ...	...	...	905	1,158	2,063
Lala Indra Sahai ...	...	...	2,306	72	2,378

Personal.—Colonel Sir Swinton Jacob, K.C.I.E., having been deputed for special duty on Protective Irrigation Works in Rajputana under the orders of the Government of India, the Jaipur State Public Works Department remained in charge of Mr. C. E. Stotherd, A.M.I.C.E.

Mr. Stotherd desires to place on record the excellent services rendered by the three State Assistant Engineers, Lala Rup Chand, Babu K. N. Mukerji and Lala Indra Sahai. Their reports are printed separately and speak for themselves.

Lala Rup Chand was in charge of the Eastern Districts, and in addition to the supervision of the work there, he has rendered very efficient help with the routine work in the Head Office. He was absent on two months' well-earned privilege leave in May and June.

Babu K.N. Mukerji has charge of the central portion of the State, including the Sewai-Madhupur Railway. As the latter work is at present suspended, his district work has been lighter than before, but he has rendered equally useful, if less conspicuous, service in the Head Office.

Lala Indra Sahai has had his head-quarters at Chandsen on the new Irrigation Tank there, and in the centre of his District (the Western). By his presence there the efficiency of working has been greatly increased, and all work there is now practically up to date. He was on nearly two months' leave on urgent private business in April and May.

Overseers and Sub-Overseers.—L. Nathu Lal has had charge of the works in the vicinity of the city. He has had long experience of these, and his work is carried out efficiently and well.

In the districts B. Kotu Mull, B. Abdul Rahim and L. Chandu Lal are well reported on among the Overseers.

Of the Sub-Overseers, L. Nathu Lal has been promoted to be Overseer at Mahwa. B. Harsaran Das promises well and has carried out the survey of some new projects with intelligence and care. There are 14 Overseers and Sub-Overseers on the Budget establishment, *viz.* Overseers, M. Nathu Lal, B. Kotu Mull, B. Mohomud Hoosein, B. Chandu Lal and B. Abdul Rahim; Sub-Overseers, B. Pooran Lal, B. Nathu Lal, B. Harsaran Dass, B. Wajid Khan, B. Ganga Pershad, B. Dina Nath, B. Gulzari Lal, B. Bansidhar and B. Gokul Chand.

Office Establishment.—The working of the office during the past year has been efficient and satisfactory.

Lala Shiam Soondur, the head clerk and accountant, has had the immediate supervision of the English Office and deserves special mention.

Much of the accumulated arrears of work has now been cleared off.

Among the remaining clerks in the English Office, Lala Indur Lal and Pundit Bala Bakhsh are patient and steady workers, B. Ajodhya Pershad promises well, and all the remainder have also worked hard and done their best.

A complete list of the head office establishment is printed below :—

English Office.

L. Shiam Soondur.
L. Inder Lal.
P. Bala Bakhsh.
B. Ajodhya Pershad.
L. Chotey Lal.
L. Johri Lal.
L. Jai Ram.
L. Madan Mohan Lal.
P. Sri Dut.
L. Nathu Lal.
B. Het Ram.
Seth Kanhaya Lal, Treasurer.
L. Misri Lal, Sub-Treasurer.
L. Mohri Lal, do.

Persian Office.

M. Anandi Lal, Head serashtadar.
M. Madan Lal.
M. Jumna Pershad.
P. Ram Pertap.
P. Jai Narain.
M. Ram Lal.

Stores.

P. Ram Narain, Store-Keeper.
M. Jeewan Bakhsh.
L. Chandu Lal.
L. Bansi Bullabh.
M. Paras Lal.

Drawing Office.

B. Shanker Lal, Head Draftsman.
B. Lal Chand.
B. Gahra Lal.
P. Sheo Narain.

Rainfall.—An inspection of Appendix (H) will show the distribution of the rainfall throughout the State during the period from October 1st, 1902, up to September 30th, 1903, being a complete season's rainfall.

These figures have been kindly furnished as usual by Lieutenant-Colonel P. D. Pank, I.M.S., being the records kept at the State dispensaries.

VI—MISCELLANEOUS.

Work in connection with the Delhi Coronation Durbar.

In October 1901, H. E. the Viceroy asked Colonel Jacob to see him at Simla in connection with work proposed for the Coronation Durbar for the 1st January 1903 at Delhi, and explained his wishes. On the 2nd December Colonel Jacob visited Delhi and met the members of the Committee, and saw the places and took measurements. Designs were prepared accordingly for the Amphitheatre on the *Maidan*, where the King's Proclamation was to be announced, for the additions and alterations necessary to the buildings in the Fort at Delhi, where the Investiture ceremony was to take place and the State Ball, etc. These were prepared in the office of the Superintending Engineer at Jaipur and were submitted on the 1st January, 1902, with notes on each, explaining the proposals and giving particulars of the accommodation provided.

On the 19th April 1902, Colonel Jacob met the Viceroy at Delhi and visited each of the places with him, noting the alterations desired in the designs, and proposed arrangements; and advised regarding the details for the Electric Lighting in the Fort Buildings, etc. In a few days revised plans were submitted to the Foreign Secretary, and copies to the Chief Engineer of the Punjab, an explanatory memorandum with each.

The work was carried out accordingly by the Punjab Public Works Department, but it is something to the credit of the Jaipur State, that its officers and draftsmen should have been selected to assist in an Imperial Work of this sort.

Delhi Coronation Durbar Camp.—At the request of the Durbar, arrangements for the Jaipur State Camp at the Delhi Durbar were taken in hand on the 13th November 1902. As the first detachments of troops and men were expected to arrive in Delhi about the middle of December, the time available for preparations was very short, while the scarcity of labour owing to the extensive work going on enhanced the difficulties.

The work was placed under the immediate supervision of Babu K. N. Mukerji, Assistant Engineer, and the results reflect great credit on his management.

The following is a brief account of the work done :—

Earthwork.—A good deal of clearance and levelling was necessary before anything else could be done, while the ground had to be made up at the place at which the *Khasa* tents were erected.

Roads.—Three principal roads were made in the main camp, together with a complete circular road within the main square. Two inches of metal was first laid down and then covered with red *bujri*. Iron Gates supported by wooden posts and enclosed in hollow brick pillars were erected at the main entrance to the camp. A second road was made from the public road to the back of the camp for convenience in getting out carriages and horses.

Water Supply.—This was the great difficulty. The water in the neighbouring wells was scanty and brackish and many of these wells were situated in other camps, or at a distance from the Jaipur Camp.

The Imperial Government had undertaken to lay a main from the Delhi Water Works service reservoir on the Ridge, but even this supply was to be strictly limited, while all animals were to be sent for watering to a *rajbaha* of the Jumna Canal, about half a mile from the Jaipur Camp.

Under these circumstances it was thought desirable to make independent arrangements to supplement this supply, and as events turned out this action was fully justified.

By the courtesy of the Agent, B. B. & C. I. Railway, a two-inch W. I. pipe line was laid from the R. M. Railway Locomotive tank, distant over a mile from the camp, and a supply of drinking water was thus distributed all over the camp by branch lines of piping from the main two-inch pipe. The head of water at the camp was about 15 feet and taps were erected at different places to suit the convenience of all, wagon tubs being placed under each tap to catch all waste water, and this waste water was subsequently used for watering the camp garden and flower pots.

This supply of water, being pumped by the Railway into their tank from a well on the banks of the main Jumna Canal, was virtually filtered . . . Jumna water.

The cost of this work included merely the railway freight of the piping to and from Delhi, together with the cost of laying. A small charge of eight annas per thousand gallons was also levied by the Railway Company to recoup themselves for pumping charges.

Some two hundred thousand gallons of water were thus delivered in the camp, as registered by the meter fitted at the tank for this purpose.

Lighting.—The external lighting was done by one 750 candle power Washington light erected on a 20 feet pole, and which was specially purchased for the occasion. To supplement this, fifteen 100 candle power incandescent oil lamps were erected in the main camp and worked on hire by contract. All these lamps give an excellent light.

The rest of the camp was provided with forty ordinary kerosine oil street lamps.

For internal lighting kerosine oil lamps were used, while in the Durbar's reception tent and for the *shamiana* 32 candle brackets arranged to clip on to the tent poles, and a number of standards supporting candlesticks were also specially made for the occasion.

A supply of *chiraghs* and country oil was also kept ready in case it might be necessary to illuminate the pathways.

Shelters.—In addition to the tents two long ranges of sheds for carriages and horses were erected. These were made of a framework of tramway rails, roofed with corrugated iron sheets.

The whole was surrounded with spare *kanats* belonging to old tents, and thus formed a complete shelter for the more valuable horses and carriages.

The tramway thus served a double purpose, first being used in running down all the camp equipage and tents from the Serai Rohilla Station and subsequently being utilized for the framework of the sheds.

Other shelters were also formed of tent tops erected on a framework of water piping.

All the materials were sent on loan from the P. W. D. Store at Jaipur, and thus the cost of the work includes nothing but railway freight both ways and erection.

Conservancy.—The conservancy arrangements of all the camps were under the general control of a special sanitary officer deputed by the Imperial Government.

At his suggestion a range of latrines were erected over trenches at the extreme upper end of the camp. These latrines were constructed of mats. Some corrugated iron latrines were also sent from Jaipur on loan from the Municipality.

A range of huts was also specially built for the accommodation of the special staff of sweepers sent by the Durbar to keep the whole camp clean.

Gardening.—The time available was very short, and the scarcity of water a great difficulty. Nevertheless a great deal was done to beautify the camp by sowing large beds of *methi* and cress seed which makes an excellent substitute for grass as a temporary measure.

One thousand flowers and palms in pots were sent from the Ramnawas Gardens at Jaipur, the Railway wagons being fitted up with stages and shelves of mango planks in tiers so as to load them to their full carrying capacity, whereby great economy was effected in reducing Railway freight.

Dalies of cut flowers and vegetables were also despatched from Jaipur to the camp while it lasted.

The wooden planks were used in various ways in the camp, and were afterwards returned to Jaipur with the flowers at the end of the camp.

In the centre of the camp garden a flagstaff, 50 feet in height, was erected, consisting of W. I. water piping. From this flagstaff the five-coloured State flag or *Pachruna* was depended.

Fencing.—The whole camp was surrounded by a fencing consisting of W. I. fence posts and galvanized seven strand wire sent from Jaipur P.W.D. Stores, which formed a substantial barrier against all intruders, while sentries were posted at all the angles of the camp day and night.

General.—The floor of all the tents was laid with white Jumna sand to keep the white ants from attacking the *durries* and *kanuts*.

Special *chulas* of brickwork were built for the convenience of the Durbar.

The cold at nights was most intense. Special sheet iron camp stoves for burning wood were supplied to the tents of those who required them, while others used *sigries*.

The supply of food, grass and fuel was arranged by Pundit Raj Narain, the Raj Munsarim of Jaisinghpura at Delhi.

The tubs of the tramway wagons formed excellent drinking troughs for the animals in the camp. The elephants were sent to the Jumna canal for water.

H. H. the Mahamja arrived in the Camp on the morning of the 26th December and remained until the 13th of January, when he returned to Jaipur.

The weather during the whole period remained fine and intensely cold, with the exception of the night of the 5th January, when some slight showers of rain fell.

Expenditure.—The following gives the details of the expenditure on the camp works through the Agency of this department:—

		Rs.	a.	p.			Rs.	a.	p.
Establishment (allowances only)	...	154	14	6	Railway fare and freight	...	607	2	0
Roads	...	1,611	8	3	Carriage shed	...	349	7	3
Sweepers' huts	...	120	0	0	Latrines	...	12	2	0
Gardening	...	554	13	1	Miscellaneous	...	1,427	3	1
Water supply	...	653	13	1	Vegetables and cut flowers	...	39	4	6
Lighting	...	1,087	11	7	Contingencies	...	662	6	1
Earthwork	...	589	14	3					
					Total	...	7,890	3	8

Plan.—A plan showing the arrangement of the camp is annexed.

Imperial Works.—Assistance was given in various ways by the Jaipur State.

At the urgent request of the Superintendent, Coronation Works, some two thousand running feet of three inch cast iron piping was sent to Delhi on loan for laying temporarily in the public mains.

For the camp of the Agent to the Governor-General in Rajputana, the services of the head gardener of the Ramnawas Gardens of Jaipur were lent for about three months, and 250 flowers in pots and some gardening requisites were also sent on loan to Delhi.

In addition to the works in connection with the Coronation Camp at Delhi, arrangements were made at Jaipur for the reception of H. E. the Viceroy and afterwards for H. R. H. the Duke of Connaught. All these events following in quick succession caused some pressure of work to get everything completed in time, and some interruption to the progress of ordinary business. Everything, however, passed off satisfactorily.

Visit of H. E. the Viceroy to Jaipur.—His Excellency arrived at Jaipur by special train from Sambhur at 4-30 P.M. on November 27th.

The usual arrangements were made for decorating the city and roads with flags and triumphal arches, regulating the traffic, and providing accommodation for visitors to witness the arrival and processions.

The Residency Kothi had been put into thorough repair, and a camp laid out to the west of the gardens, the work being under the superintendence of the Darogha Imarut. The camp and grounds were decorated with flowers from the Ramnawas Gardens.

On Friday, the 28th November, there was a State banquet at the palace and the city was illuminated. The route from the Residency to the city was decorated with coloured paper lanterns of local manufacture. These were hung in the trees bordering the route along which the carriages passed. Additional illumination was made with *chiraghs*, and various devices were also executed in Gas Jets at conspicuous points in the city.

His Excellency left Jaipur for Bhurtpur, at 2-30 P.M., on November 30th, from the private railway platform at the back of the Residency.

Visit of H. R. H. the Duke of Connaught.—His Royal Highness arrived at Jaipur by special train on Tuesday, the 10th February, at 10 A.M.

Similar arrangements to those detailed above were made for his reception.

The city was illuminated on February 11th. Some of the visitors went to Sanganeer and visited the interesting Jain temples there, and a roadway was specially cleared through the old town to facilitate the passage of the carriages.

His Royal Highness left Jaipur on February 13th, at 5 P.M.

Conclusion.—The foregoing report speaks for itself as to the liberality with which H. H. the Maharaja promotes the Public Works of the State, and the undersigned can testify to the sympathetic consideration with which all proposals put forward are taken into consideration by the Members of the State Council.

The State has passed through a series of very bad years, but it is hoped that with the advent of better seasons a still more rapid development of the resources of the State, especially in the matter of irrigation, will become possible.

(Sd.) C. E. STOTHERD,
Officiating Superintending Engineer,
Jaipur State.

APPENDICES.

APPENDIX A.

Abstract of Receipts and Expenditure on the Public Works Department for the year ending 31st August 1903.

Heads of Account.	Receipts.	Expenditure.	Net.	
			Receipts.	Expenditure.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Balance on 1st September 1902</i> ...	1,10,170 7 4	...	1,10,170 7 4	...
Original Works Buildings ...	2,901 15 11	3,500 4 8	...	598 4 9
Do. Communications ...	3,063 8 1	7,956 1 5	...	4,892 9 4
Repairs to Buildings ...	6,940 6 10	10,730 3 3	...	3,789 12 5
Do. Communications ...	4,820 10 0	1,36 040 12 10	...	1,31,220 2 10
Miscellaneous Public Improvements ...	5,292 1 7	73,260 14 8	...	67,068 13 1
City Waterworks ...	4,785 9 11	40,924 15 7	...	36,139 5 8
State Cotton Press, Jaipur, Capital Account ...	16 3 6	12 7 1	16 3 6	12 7 1
Do. Mandawar do. ...	78 6 10	1,381 2 7	...	1,302 11 9
Irrigation Works ...	27,333 10 7	2,41,732 7 5	...	2,14,398 12 10
Imarat Works ...	...	46,003 11 11	...	46,003 11 11
Do. Miscellaneous Items ...	9,806 8 7	9,806 8 7	9,806 8 7	9,806 8 7
Other State works ...	553 3 11	664 3 3	553 3 11	664 3 3
Establishment ...	61 0 0	56,193 2 3	...	56,132 2 3
Total ...	65,653 5 9	6,23,266 15 6	10,376 0 0	5,72,929 9 9
<i>Miscellaneous Items.</i>				
Raj Treasury, P. W. D., up to 1901-02,	4,56,737 0 5	85,023 11 0	3,71,708 5 5	...
Do. do. for the year 1902-03 ...	93,028 14 5	1,254 5 10	91,774 8 7	...
Do. Imarat Works ...	52,445 1 9	6,019 5 2	46,395 12 7	...
Miscellaneous Advances ...	3,18,505 14 7	3,22,292 0 4	...	9,786 1 9
City Water supply revenue ...	1,230 6 0	1,213 13 6	16 8 6	...
Ram Newas Garden do. ...	1,471 15 0	1,329 15 10	141 15 2	...
Agra Kothi do. ...	471 1 0	799 3 3	...	328 2 3
Ice revenue ...	2,814 10 0	4,665 3 1	...	1,850 9 1
Dik Bungalows rent ...	826 8 0	865 11 0	...	39 3 0
Roads (sale of dry trees, etc.,) revenue	955 12 9	956 13 8	...	1 0 11
Sale of Jaipur Portfolios ...	748 3 0	600 8 6	147 10 6	...
Fine Account ...	742 0 9	56 8 0	705 8 9	...
Unclaimed Wages ...	596 8 7	1,433 12 0	...	842 3 5
Security Deposit ...	621 14 0	730 9 9	...	109 11 9
Profit and Loss ...	3,460 6 10	4,056 13 9	...	596 6 11
Lime Manufacture ...	...	16,142 12 5	...	15,142 12 5
Workshop Contingencies ...	930 11 1	1,050 9 2	...	119 14 1
Stock Account... ...	12,853 6 10	7,428 11 8	5,424 11 2	...
City Water supply stock ...	6,264 4 0	5,566 3 10	698 0 2	...
Ram Newas Garden, General Stock ...	884 5 7	204 1 7	680 4 0	...
Theft of late M. Lal Singh ...	64 9 0	25 14 3	38 10 9	...

*Abstract of Receipts and Expenditure on the Public Works Department for the year ending
31st August 1903.*

Heads of Account.	Receipts.	Expenditure.	NET.	
			Receipts.	Expenditure.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Tori Sagar Turbine Revenue . . .	411 13 5	43 10 6	368 2 11	...
Keep of horses for the Executive Engineer, Jaipur . . .	...	914 7 5	...	914 7 5
Travelling, etc., expenses of officers in the Eastern district . . .	92 0 11	692 0 11	...	600 0 0
Cricket play in Ram Newas Garden ..	...	200 0 0	...	200 0 0
Pensions . . . . .	...	3,617 14 0	...	3,617 14 0
Deposit Account	6,923 15 3	6,923 15 3	6,923 15 3	6,923 15 3
Wooden cars for boat for catching fish at hand Sodala . . .	...	3 0 9	...	3 0 9
Repairing Superintending Engineer's tents for Colonel Sir Swinton Jacob, K.C.I.E.	14 0 9	14 0 9	14 0 9	14 0 9
Cost of flagstuffs placed on Daschra at Chandni-Chouk, Roor ki Mandi and Pahargunj . . . . .	...	24 1 6	...	24 1 6
Lime purchase account, Imarat Department	362 12 0	362 12 0	362 12 0	362 12 0
Surveying and Drawing of Garden Rao Rajaji of Umyara . . . . .	...	3 14 9	...	3 14 9
Playing cricket matches at out-stations . . . . .	...	91 8 0	...	91 8 0
Cost of one flag-staff, Rahdari Ram-pole . . . . .	...	8 0 6	...	8 0 6
Gratuity or parwarish for <i>nookta</i> of late Lala Moon Lal, zillahdar, Western district . . . . .	...	100 0 0	...	100 0 0
Sale of books on Jaipur Observatory and its Builder	12 6 0	12 6 0	12 6 0	12 6 0
Rent of a shop in the use of P.W.D. for keeping flags, etc. . . . .	...	23 5 0	...	23 5 0
Testing Kishengarh Silora quarry slabs . . . . .	...	108 15 9	...	108 15 9
Gratuity or parwarish to Babu Jadu Nath, Manager, Cotton Press, Jaipur, for marriage of his son . . . . .	...	100 0 0	...	100 0 0
Deposit account, (decree-holders)	49 12 0	34 8 6	49 12 0	34 8 6
Repairs to conveyances (dogcart and carriage) of the Executive Engineer, Jaipur . . . . .	...	214 11 3	...	214 11 3
Collecting grass at Dosa, Lalote, etc.	11 8 0	...	11 8 0	...
Inter-Departmental transfers	5 2 0	...	5 2 0	...
Jaipur Portfolios presentation account . . . . .	...	75 10 3	...	75 10 3
Polishing Kishengarh Marble pieces . . . . .	...	0 10 0	...	0 10 0
Subsistence allowance to Bhori Lal and Shiam Soondar Lal, grandsons of late Babu Sookh Lal, overseer . . . . .	...	51 4 7	...	51 4 7
Total	9,63,536 15 11	4,80,357 9 3	5,25,479 10 6	42,300 3 10
Total	10,29,190 5 8	11,08,564 8 9	5,35,855 10 6	6,15,229 13 7
Balance on 31st August 1903 . . . . .	...	30,796 4 3	...	30,796 4 3
GRAND TOTAL	11,39,360 13 0	11,39,360 13 0	6,46,026 1 10	6,46,026 1 10

APPENDIX B.

Statement of works executed in the Public Works Department, Jaipur State, for the Raj
official year ending 31st August 1903.

Name of work.	Amount sanctioned.	EXPENDITURE.			Total.
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.		
	Rs. a p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
ORIGINAL WORKS—BUILDINGS.					
Works for buildings of Rao Bahadur Babu Kanti Chunder Mookerji ...	12,540 5 9	13,752 13 3	...	12,540 5 9..	
Dispensary building at Mahwa ...	8,613 0 0	8,853 9 0	-1,212 7 6	8,643 0 0	
Jail building at Hindown ...	23,080 0 0	21,490 4 5	-215 9 0	21,474 2 0	
Rest houses in the Western Districts ...	...	...	-16 2 5	...	
Thana buildings in Shaikhawati ...	17,218 0 0	{ -1,000 0 0 1,015 8 6 }	-15 8 6	{ -1,000 0 0 1,000 0 0 }	
Quarters at the Overseer's Office, Mahwa Sub-Division ...	1,157 0 0	12,909 10 7	182 10 4	13,092 4 11	
Making bath-room at the Bungalow of Colonel Sir Swinton Jacob, K.C.I.E. ...	207 0 0	671 9 4	{ 355 14 3 -5 14 0 }	{	
Fixing a Lift Force Pump in the well and connecting it with the pipe to the pre-sent tank on the roof of Operation room at the Mayo Hospital ...	1,180 0 0	179 9 2	22 5 3	1,021 9 7	
Preparing kutcha Cookroom at Dehmi Bungalow ...	123 0 0	954 0 1	...	201 14 5	
Constructing a Chowki house at Bandikui for accommodation of the Engineering officials ...	620 0 0	...	3 10 6	957 10 7	
Constructing two privies for public use near the Dispensary building at Sambhar ...	488 6 4	...	117 2 0	117 2 9	
Making Ghoomtees or Sentry boxes for Hindown Jail ...	234 0 0	...	1 10 2	1 10 2	
Making one block of 13 mud houses with corrugated sheet covering at Jaipur Transport Corps ...	2,517 0 0	...	{ 896 5 4 -188 6 6 }	{	
Preparing a Tribara at Mozabad ...	...	...	0 12 6	0 12 6	
Total ...	...	1,919 13 7	1,919 13 7	...	
	...	-918 0 0	-918 0 0	...	
ORIGINAL WORKS—COMMUNICATIONS.					
Fair weather Road from Gangapore to Bharoti ...	13,763 0 0	9,942 11 6	3,500 4 8	-1,948 0 0	
Pucca road to connect Chaksu Station with the Main Jaipur and Tonk Road ...	8,405 0 0	7,219 6 3	-2,001 15 11	61,378 5 1	
Pucca link road from Amargarh quarries up to Ghat Road ...	1,759 0 0	{ 1,603 0 10 +57 4 8 }	1,030 14 11	10,973 10 5	
Road from Naraina to Malpura ...	19,069 0 0	18,126 10 0	1,063 9 0	8,312 15 3	
Do. Kothoon to Lalsote ...	11,962 0 0	{ 956 16 6 -39 15 0 }	55 8 9	1,607 15 9	
Do. Jhur Station to Agra Road ...	1,713 0 0	{ 1,733 2 0 -576 6 3 }	936 16 6	19,043 9 9	
Do. Bassi Station to do. ...	...	{ 1,178 9 0 -148 4 9 }	...	11,786 1 10	
Do. Jatnara do. do. ...	1,085 0 0	...	...	1,191 11 0	
	...	161 6 9	...	457 13 3	
	...	457 13 3	...	719 11 4	
	...	125 3 8	594 7 8	...	

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rajmahal-Malpura Road ... ..	...	1,603 2 4	{ 89 11 3 -1,692 13 7 }	{ 1,692 13 7 -1,692 13 7 }
Pucca road or cartway towards East to connect Jhir Station Road	1,084 0 0	113 11 9	{ 1,054 5 7 -389 3 6 }	{ 778 13 10 -389 3 6 }
Preparing pucca road at Sambhar Dispensary ... ..	...	...	{ 198 13 9 -198 13 9 }	{ 198 13 9 -198 13 9 }
Total ... ..	...	50,069 13 1	{ 7,956 1 5 -3,063 8 1 }	{ 54,962 6 5 -3,063 8 1 }
REPAIRS TO BUILDINGS.				
Works at Hathroi Kothi	2,53,876 5 1	2,55,743 5 11	{ 932 14 0 -1,163 7 11 }	{ 2,55,512 12 0 -1,163 7 11 }
Do. Mayo Hospital	49,036 6 0	{ 46,662 6 2 +1,465 2 2 }	{ 507 7 6 -234 10 0 }	{ 48,400 5 10 -234 10 0 }
Petty works at old Jail, Jaipur	5,787 13 1	5,787 13 1	...	5,787 13 1
Do. at Natanika Bagh ... ..	...	391 6 11	{ 360 10 1 -708 9 7 }	{ 752 1 0 -708 9 7 }
Repairs, &c., to Albert Hall and works for Museum ... ..	...	11 13 6	{ 3 7 0 -15 4 6 }	{ 15 4 6 -15 4 6 }
Repairs to District dispensaries ... ..	...	342 3 8	{ 139 1 9 -543 11 11 }	{ 481 5 5 -543 11 11 }
Do. quarters occupied by the Residency Office Establishment	635 6 0	233 9 3	{ 516 7 3 -204 11 8 }	{ 595 4 10 -204 11 8 }
Petty works at new Jail, Jaipur	49 2 6	49 2 6	...	49 2 6
Agra Kothi—repairs to	20 6 3	1 4 0	19 2 3	20 6 3
Whitewashing Deoli Escort Lines at the Residency, Jaipur ... ..	...	63 3 8	... 63 3 8	{ 63 3 8 -63 3 8 }
Renewing chapper of dressing shed in the Chapper ward at Mayo Hospital ... ..	...	20 5 2	-20 5 2	{ 20 5 2 -20 5 2 }
Repairing Frescoes on the walls of Jaipur Museum	559 0 0	172 2 6	379 15 9	552 2 3
Petty works at the Jaipur Dak Bungalow as per request of Mr. Rustomji	192 0 0	143 5 0	34 5 2	177 10 2
Making a platform in the Female ward and renewing grass chappers of Menial's quarters at Mayo Hospital ... ..	...	225 12 4	{ 7 11 0 -233 7 4 }	{ 233 7 4 -233 7 4 }
Works at the Superintending Engineer's Bungalow ... ..	...	-2 13 0	{ 4 11 6 -1 14 6 }	{ 4 11 6 -4 11 6 }
Repairing stable for horse of the Head Clerk, Medical Department, at Natanika Bagh ... ..	...	52 3 2	-52 3 2	{ 52 3 2 -52 3 2 }
Petty works at Lansdowne Hospital ... ..	...	366 3 10	-366 3 10	{ 366 3 10 -366 3 10 }
Preparing a wooden ladder for the Meteorological Observatory ... ..	...	23 13 6	-23 13 6	{ 23 13 6 -23 13 6 }
Repairs to Chowki at Mahwa	141 0 0	117 5 0	{ 11 9 0 -32 2 0 }	{ 96 12 0 -32 2 0 }
Filling Jhirri of well at Gangaporo Dispensary ... ..	...	1 4 6	{ 1 2 0 -2 6 6 }	{ 2 6 6 -2 6 6 }
Whitewashing and repairs to Bungalow at Kaligh... ..	96 0 0	31 7 9	41 14 9	73 6 6
Repairs to Dispensary building at Nimka Thana ... ..	...	153 13 9	-153 13 9	{ 153 13 9 -153 13 9 }

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Making wooden door of Dead house at Sangancer Dispensary ...	...	3 8 0	-3 8 0 {	3 8 0 -3 8 0
Making <i>pardah</i> wall of Hindown Dispensary ...	...	28 10 8	-28 10 8 {	28 10 8 -28 10 8
Repairs to Moharrir's quarter at Mandawar,	...	0 8 6	-0 8 6 {	0 8 6 -0 8 6
Do. Hindown Dispensary (Iron pipe)	...	7 2 1	-7 2 1 {	7 2 1 -7 2 1
Making a window in cook-house of compounder and repairing chapper of Tribhara for Sepoys at Sewai Madhopur Dispensary ...	...	...	{ 24 3 3 -24 3 3	24 3 3 -24 3 3
General repairs to floor, doors, etc., white and color washing the whole building, Mayo Hospital ...	...	...	{ 1,065 10 9 -1,065 10 9	1,065 10 9 -1,065 10 9
Repairing gango doors and putting pneumatic springs to doors Mayo Hospital ...	...	...	{ 449 12 11 -449 12 11	449 12 11 -449 12 11
Repairing chappers, etc., of Observatory Office and huts at Natanika Bagh ...	...	...	{ 20 12 3 -20 12 3	20 12 3 -20 12 3
Repairs to curtains at the East and West Turnstiles in the Jaipur Museum ..	...	...	{ 1 12 0 -1 12 0	1 12 0 -1 12 0
Petty works at Moti Katra Dispensary ...	...	...	{ 93 13 3 -93 13 3	93 13 3 -93 13 3
Renewing lime polish of Medical ward and verandah at Mayo Hospital ...	...	...	{ 18 6 0 -18 6 0	18 6 0 -18 6 0
Repairing stable and outhouses, etc., at the Superintending Engineer's bungalow compound ...	776 0 0	...	733 5 5	733 5 5
Repairs to Museum at Albert Hall ...	1,000 0 0	...	527 8 6	527 8 6
Levelling the ground near the large entrance gate on the west side of Mayo Hospital ...	...	...	{ 71 13 3 -71 13 3	71 13 3 -71 13 3
Renewing chappers of the kitchen verandah of Mayo Hospital ...	...	...	{ 19 5 3 -19 5 3	19 5 3 -19 5 3
Old Jail wards—examining broken roof ...	...	...	{ 5 5 0 -5 5 0	5 5 0 -5 5 0
New Jail, Jaipur—putting glass panes to doors of Hospital and Office ...	21 3 9	...	21 3 9	21 3 9
Repairs to Moharrir's quarter at Hindown...	...	...	{ 1,028 11 2 -56 6 11 }	972 7 3
Do. Thana building at Sooroth ...	21 0 0	...	11 10 0	11 10 0
Repairing and thatching chapper of Moharrir's quarter at Dehmi bungalow ...	146 0 0	...	145 2 0	145 2 0
Polishing marble flooring in the Operation room and Surgical ward at Mayo Hospital ...	...	...	{ 7 7 6 -7 7 6	7 7 6 -7 7 6
Petty works at old Jail Hospital (renewing glass panes of skylights, etc.) on reception of H. E. the Viceroy as per request of the Superintendent, Jails...	46 12 5	...	46 12 5	46 12 5
Whitewashing Dead house at Sewai Madhopur Dispensary ...	...	...	{ 15 2 6 -15 2 6	15 2 6 -15 2 6
Gilding a motto in front of Taj at Albert Hall ...	...	...	{ 2 0 3 -2 0 3	2 0 3 -2 0 3

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
District Jail Dispensary—whitewashing, etc.	{ 43 5 3 —43 5 3	43 5 3 —43 5 3
Repairing zinc sheet window in main hall at Albert Hall	{ 0 9 6 —0 9 6	0 9 6 —0 9 6
Petty works in carriage shed at Poorani Basti Dispensary	{ 78 5 5 —78 5 5	78 5 5 —78 5 5
Removing rubbish lying near the cook room at Mayo Hospital	{ 19 15 6 —19 15 6	19 15 6 —19 15 6
Supplying six night-soil Buckets and 24 iron Pans for Mayo Hospital	{ 49 4 0 —49 4 0	49 4 0 —49 4 0
Petty works and repairs to roof, etc., of Hospital Assistant's rooms at Poorani Basti Dispensary	{ 247 13 4 —247 13 4	247 13 4 —247 13 4
Petty works in Babu Ajodhya Pershad Hospital Assistant's house at Mayo Hospital	{ 22 12 5 —22 12 5	22 12 5 —22 12 5
Alteration in Poorani Basti Dispensary	{ 30 7 6 —30 7 6	30 7 6 —30 7 6
Opening two doors instead of almirahs in the operation room at Mayo Hospital	{ 149 1 1 —149 1 1	149 1 1 —149 1 1
Adding two new rooms with thatching chapper to the Hospital Assistant's house at Sambhar Dispensary	79 9 6	79 9 6
Surveying and drawing of Nimka Thana Fort	31 12 7	31 12 7
Mayo Hospital—Repairing <i>choolas</i>	15 3 10	15 3 10
Do. do putting 3' T to drainage pipe of Male Surgical ward	{ 35 15 2 —18 9 0 }	17 6 2
Hathroi Kothi. Working Tramway Maintenance	125 14 3	125 14 3
Furniture for Lansdowne Hospital	{ 39 3 9 —39 3 9	39 3 9 —39 3 9
Fixing new wooden frame and doors to corn godown at old Jail, Jaipur, eaten by whiteants	22 15 0	...	22 15 0	22 15 0
Constructing four <i>burjees</i> of Boundary at Jail near the Church at Ghat Gate	17 0 0	...	16 11 10	16 11 10
Erecting water tap near the Larimon's Boiler at Mayo Hospital	{ 34 13 1 —34 13 1	34 13 1 —34 13 1
Closing holes at Native Doctor's house at Chandpole Jail	{ 0 14 6 —0 14 6	0 14 6 —0 14 6
Petty works at Hindown Dispensary	29 14 11	29 14 11
Mayo Hospital—Operation room, repairing table	{ 1 0 3 —1 0 3	1 0 3 —1 0 3
Renewing chappiers of the top house and summer house at Natanika Bagh	{ 215 13 2 —215 13 2	215 13 2 —215 13 2
Mayo Hospital—Removing, straightening and refixing wire of picture	{ 4 9 3 —4 9 3	4 9 3 —4 9 3
Do. do— Putting wire netting caps over the mouths of the pipes	{ 0 8 9 —0 8 9	0 8 9 —0 8 9
Repairs to Post Office at Hindown	145 0 0	...	143 9 6	143 9 6
Do. Bungalow No. 6, near Inspecting Bungalow	256 0 0	...	247 9 0	247 9 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Works at the Bungalow of Colonel Sir Swinton Jacob, K.C.I.E. ...	184 0 0	...	184 5 5	184 5 5
Petty works at Jail building at Hindown (repairing Parnala etc.) ...	123 0 0	...	99 3 9	99 3 9
Do. do. at the Residency Jaipur ...	...	...	{ 34 2 0 -34 2 6	34 2 0 -34 2 6
Making arrangements for sprinkling <i>khuss</i> <i>tattees</i> at the Residency, Jaipur ...	...	...	{ 114 10 5 -114 10 5	114 10 5 -114 10 5
Necessary repairs and whitewashing etc., Bandikui Dispensary ...	...	...	39 8 2	39 8 2
Repairing chapper, etc., at the Officiating Superintending Engineer's bungalow compound ...	91 0 0	...	86 11 9	86 11 9
Mayo Hospital—Night-soil buckets and pans for ...	...	...	{ 108 11 9 -108 11 9	108 11 9 -108 11 9
Do. do—Erecting iron pulleys for drawing water ...	...	...	{ 6 14 10 -6 14 10	6 14 10 -6 14 10
Lansdowne Hospital—Putting pneumatic springs to doors and windows ...	...	...	54 9 2	54 9 2
Petty works at Jaipur Dāk Bungalow ...	214 0 0	...	168 5 8	168 5 8
Renewing grass chappers at Band Master's bungalow (Band servants' houses and practice room) ...	522 0 0	...	461 15 0	461 15 0
Renewing chapper of compounder's house at Sanganeer Dispensary ...	...	...	23 1 3	23 1 3
Repairs to wind vane, Mahwa Dispensary...	...	...	4 6 6	4 6 6
Residency Garden—Making a new portion of road ...	...	...	16 13 3	16 13 3
Whitewashing and repairs to floor, etc., of Delhi Bungalow with outhouses occupied by the Engineering Department and Police ...	257 0 0	...	177 8 9	177 8 9
Mayo Hospital—Hanging pictures of His Highness the Maharajah ...	...	...	{ 5 2 3 -5 2 3	5 2 3 -5 2 3
Petty works at old Jail, Jaipur ...	70 0 0	...	58 11 11	58 11 11
Mayo Hospital—Renewing chappers of contagious platform ...	...	...	59 7 8	59 7 8
Repairing stable and houses of servants at the Inspecting Officer's Bungalow at Jaipur Transport Corps ...	313 0 0	...	5 9 6	5 9 6
Sanganeer Dispensary—Putting glass panes in the Native Doctor's house ...	...	...	2 11 9	2 11 9
Cutting off tops of trees at the Meteorological Observatory, Jaipur ...	...	...	3 10 0	3 10 0
Thana Building at Hindown ...	108 0 0	...	98 12 3	98 12 3
Putting right the water pipe in the Photographic room at the Jaipur Museum ...	...	...	{ 1 14 0 -1 14 0	1 14 0 -1 14 0
Total ...	...	3,12,146 3 7	{ 10,730 3 3 -6,940 6 10	3,15,336 0 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
REPAIRS TO COMMUNICATIONS.—				
Jaipur and Tonk Road	52,713 12 5	...	{ 24,291 12 11 —36 15 0 }	24,251 13 11
Hindown Road to Karowli	20,521 14 5	...	{ 16,134 1 2 —371 12 4 }	15,762 4 10
City and Camp Roads	59,259 14 10	...	{ 51,976 3 9 —2 816 0 7 }	49,159 13 2
Ajmer Road	24,579 3 9	...	{ 12,557 15 9 —122 15 9 }	12,435 0 0
Agra Road	30,159 0 2	...	{ 19,091 1 7 —1,217 15 0 }	17,873 2 7
Lalsote Road	18,918 11 9	...	{ 8,794 12 2 —39 8 10 }	8,755 3 4
Repairs to City Bazar drains	150 0 0	...	{ 131 3 8 —52 6 0 }	78 13 8
Gangapore fair weather Road	11,086 12 1	...	{ 886 4 9 —1 0 0 }	882 4 9
Maintenance of Kothoon and Lal-sote Road	500 0 0	84 8 0	{ 67 12 6 —2 0 0 }	150 4 6
Do. Naraina and Malpura Road	2,816 0 0	957 4 6	{ 807 4 3 —129 10 0 }	1,634 14 9
Deoli and Raj Mahal Road	1,050 0 0	398 1 6	{ 570 2 3 —16 15 3 }	951 4 6
Do. fair weather Road	250 0 0	...	252 6 0	252 6 0
Lanka (Ghata) Road	68 0 0	2 1 3	{ 48 8 3 —2 1 3 }	48 8 3
Kutchia Road from Sheodaspura to Chandlai	559 0 0	170 11 0	{ 21 7 0 —8 0 0 }	184 2 0
Ordinary repairs to Road from Gangapore to Bharoti	270 0 0	...	162 1 6	162 1 6
Removing earth at Ghat Road	202 0 0	47 15 4	152 2 0	200 1 4
Repairing drain near Sargaooli	99 0 0	...	95 9 4	95 9 4
Total ... ..	...	1,660 9 7	{ 1,36,010 12 10 —1,820 10 0 }	1,32,880 12 5
MISCELLANEOUS PUBLIC IMPROVEMENTS.				
Ram Newas Garden—Certain necessary works	1,504 0 0	1,026 5 6	221 2 9	1,247 8 3
Ram Newas Garden	42,388 12 9	...	{ 33,469 8 11 —1,139 15 4 }	32,329 9 7
Executive Engineer's Bungalow Garden Maintenance	677 15 5	...	586 5 2	586 5 2
City Water-supply Maintenance	59,932 6 6	...	{ 40,890 8 9 —4,751 13 11 }	36,138 10 10
Repairing and clearing well in Poorani Basti near Rao Rajaji Uniyara's house ... ..	...	—73 7 0	73 7 0	{ 73 7 0 —73 7 0 }
Sinking wooden <i>bachri</i> in well of Deva Mina near the Residency Bazar	115 8 0	49 0 0	48 13 9	97 13 9
Clearing and putting wooden <i>bachries</i> in wells in the City Jaipur	4,523 2 0	4,256 8 7	114 11 0	4,371 6 7
Agra Kothi Maintenance	3,576 13 0	...	{ 2,018 14 0 —1 14 0 }	2,017 0 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Works at the Bungalow of Colonel Sir Swinton Jacob, K.C.I.E. ...	184 0 0	...	184 5 5	184 5 5
Petty works at Jail building at Hindown (repairing Parnala etc.) ...	123 0 0	...	99 3 9	99 3 9
Do. do. at the Residency Jaipur ...	...	...	{ 34 2 6 —34 2 6	{ 34 2 6 —34 2 6
Making arrangements for sprinkling <i>khues lattees</i> at the Residency, Jaipur ...	...	...	{ 114 10 5 —114 10 5	{ 114 10 5 —114 10 5
Necessary repairs and whitewashing etc., Bandikui Dispensary ...	...	...	39 8 2	39 8 2
Repairing chapper, etc., at the Officiating Superintending Engineer's bungalow compound ...	91 0 0	...	86 11 9	86 11 9
Mayo Hospital—Night-soil buckets and pans for ...	...	...	{ 108 11 9 —108 11 9	{ 108 11 9 —108 11 9
Do. do— Erecting iron pulleys for drawing water ...	...	...	{ 6 14 10 —6 14 10	{ 6 14 10 —6 14 10
Lansdowne Hospital—Putting pneumatic springs to doors and windows ...	...	...	54 9 2	54 9 2
Petty works at Jaipur Dik Bungalow ...	214 0 0	...	169 5 8	169 5 8
Renewing grass chappers at Band Master's bungalow (Band servants' houses and practice room) ...	522 0 0	...	461 15 0	461 15 0
Renewing chapper of compounder's house at Sanganeer Dispensary ...	...	...	23 1 3	23 1 3
Repairs to wind vane, Mahwa Dispensary...	...	...	4 6 6	4 6 6
Residency Garden—Making a new portion of road ...	...	...	16 13 3	16 13 3
Whitewashing and repairs to floor, etc., of Dehmi Bungalow with outhouses occupied by the Engineering Department and Police ...	257 0 0	...	177 8 9	177 8 9
Mayo Hospital—Hanging pictures of His Highness the Maharajah ...	...	...	{ 5 2 3 —5 2 3	{ 5 2 3 —5 2 3
Petty works at old Jail, Jaipur ...	70 0 0	...	58 11 11	58 11 11
Mayo Hospital—Renewing chappers of contagious platform ...	...	...	59 7 8	59 7 8
Repairing stable and houses of servants at the Inspecting Officer's Bungalow at Jaipur Transport Corps ...	313 0 0	...	5 9 6	5 9 6
Sanganeer Dispensary—Putting glass panes in the Native Doctor's house ...	...	...	2 11 9	2 11 9
Cutting off tops of trees at the Meteorological Observatory, Jaipur ...	...	...	3 10 0	3 10 0
Thana Building at Hindown ...	103 0 0	...	93 12 3	93 12 3
Putting right the water pipe in the Photographic room at the Jaipur Museum ...	...	...	{ 1 11 0 —1 14 0	{ 1 14 0 —1 14 0
Total ...	...	3,12,146 3 7	{ 10,730 3 3 —6,940 6 10	{ 3,15,936 0 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
REPAIRS TO COMMUNICATIONS.—				
Jaipur and Tonk Road	52,713 12 5	...	{ 24,291 12 11 —36 15 0 }	24,254 13 11
Hindown Road to Karowli	22,321 14 5	...	{ 16,134 1 2 —371 12 4 }	15,762 4 10
City and Camp Roads	59,259 14 10	...	{ 51,976 3 9 —2,816 6 7 }	49,159 13 2
Ajmer Road	21,579 3 9	...	{ 12,557 15 9 —122 15 9 }	12,435 0 0
Agra Road	30,139 0 2	...	{ 19,091 1 7 —1,217 15 0 }	17,873 2 7
Lalote Road	18,918 11 9	—	{ 8,794 12 2 —39 8 10 }	8,755 3 4
Repairs to City Bazar drains	150 0 0	...	{ 131 3 8 —52 6 0 }	78 13 8
Gangapore fair weather Road	11,086 12 1	...	{ 886 4 9 —1 0 0 }	882 4 9
Maintenance of Kothoon and Lalote Road	500 0 0	84 8 0	{ 67 12 6 —2 0 0 }	150 4 6
Do Naraina and Malpura Road	2,816 0 0	957 4 6	{ 897 4 3 —129 10 0 }	1,631 14 9
Dooli and Raj Mahal Road	1,050 0 0	398 1 6	{ 570 2 3 —16 15 3 }	951 4 6
Do fair weather Road	250 0 0	...	252 6 0	252 6 0
Lanka Ghata Road	68 0 0	2 1 3	{ 48 8 3 —2 1 3 }	48 8 3
Kutch Road from Shree Jaspura to Chundlai	559 0 0	170 11 0	{ 21 7 0 —8 0 0 }	184 2 0
Ordinary repairs to Road from Gangapore to Bihari	270 0 0	...	162 1 6	162 1 6
Removing earth at Ghat Road	202 0 0	47 15 4	152 2 0	200 1 4
Repairing drain near Sargasodi	99 0 0	...	95 9 4	95 9 4
Total ... ..	...	1,660 9 7	{ 1,36,010 12 10 —1,820 10 0 }	1,32,890 12 5
MISCELLANEOUS PUBLIC IMPROVEMENTS.				
Ram Dewas Garden—Certain necessary works	1,504 0 0	1,026 5 6	221 2 9	1,247 8 3
Ram Dewas Garden	42,388 12 9	...	{ 33,469 8 11 —1,139 15 4 }	32,329 9 7
Executive Engineer's Bungalow Garden Maintenance	677 15 5	...	586 5 2	586 5 2
City Water-supply Maintenance	59,932 6 6	...	{ 40,890 8 9 —1,751 13 11 }	36,138 10 10
Repairing and clearing well in Poorani Basti near Rao Rajaji Uniyara's house ... ..	...	—73 7 0	73 7 0	{ 73 7 0 —73 7 0 }
Sinking wooden <i>bachri</i> in well of Deva Mina near the Residency Bazar	115 8 0	49 0 0	48 13 9	97 13 9
Clearing and putting wooden <i>bachries</i> in wells in the City Jaipur	4,523 2 0	4,256 8 7	114 14 0	4,371 6 7
Agra Kothi Maintenance	3,576 13 0	...	{ 2,018 14 0 —1 14 0 }	2,017 0 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Ram Newas Garden—Sinking wooden and masonry cylinders in wells Nos. 4, 5 and 11	1,099 0 0	654 7 9	410 1 2	1,064 8 11
City Conservancy Tramway maintenance,	9,072 3 3	...	8,020 4 6	8,020 4 6
Altering sand in the City Tigers' cages ...	196 11 8	...	184 9 3	184 9 3
Works at Plague Observation Camp ...	...	4 7 9	—4 7 9	{ 4 7 9 —4 7 9
Repairing water tank and Khail of well outside Ajmer Gate ...	...	23 5 7	{ 37 10 5 —61 0 0	{ 61 0 0 —61 0 0
Petty works at the Cotton Press, Jaipur ...	...	3 12 5	{ 12 7 1 —16 3 6	{ 16 3 6 —16 3 6
Making a quarter for chowkidar at the Cotton Press, Mandaor ...	...	28 7 1	—28 7 1	{ 28 7 1 —28 7 1
Bhushtees and bullocks, etc., for supplying water from wells in the Ram Newas Garden ...	988 0 0	..	{ 944 7 3 —69 0 0	{ 875 7 3
Watering trees at the Superintending Engineer's Bungalow Garden ...	970 0 1	...	{ 850 0 8 —9 7 0	{ 840 9 8
Removing pipe which has come in a well in the burial ground outside Chandpole Gate ...	...	—40 0 0	0 2 9	{ 0 2 9 —40 0 0
Clearing well at Badanpura whereon the clothings of the Mayo Hospital patients are washed ...	6 0 0	...	4 3 6	4 3 6
Sinking wooden <i>bachri</i> in well of Nawab Vilayat Ali Khanji—Chowkroy Topkhana Hazoori ...	109 0 0	89 6 6	3 6 0	92 12 6
Repairs to and thatching choppers at the Poor House, Jaipur ...	607 0 0	526 6 7	14 6 3	540 12 10
Sinking wooden <i>bachri</i> in well near Deoli Escort Lines at the Residency, Jaipur ..	68 0 0	45 5 3	1 12 6	47 1 9
Repairs to fire pumps of Municipal Committee, Jaipur ...	30 3 6	...	26 10 9	26 10 9
Reception of H. H. the Maharaja of Jaipur on his return from London ..	...	...	{ 55 10 3 —55 10 3	{ 55 10 3 —55 10 3
Reception of H. H. the Viceroy of India, Lord Curzon ...	6,576 0 0	...	6,576 0 0	6,576 0 0
Jaipur Railway ...	...	...	{ 24 10 6 —24 10 6	{ 24 10 6 —24 10 6
City Water-Supply ...	2,305 12 4	—0 10 10	{ 31 6 10 —33 12 0	{ 34 6 10 —34 6 10
Repairing kankar floor of urinal Khunda Manuck Chouk ...	12 0 0	...	10 3 3	10 3 3
Repairing pipe and wall at the City Tigers' cages ...	1 1 6	...	0 14 9	0 14 9
Engraving names of Graduates in the Maharajah's College, Jaipur ...	33 7 6	...	33 7 6	33 7 6
Expenses in connection with the Coronation Durbar at Delhi ...	7,890 3 8	...	{ 8,020 14 8 —130 11 0	{ 7,890 3 8
Galvanised iron pipe for Flag Staff at Agra Kothi ...	39 0 0	...	37 3 3	37 3 3
Wells in the South Western District Kaligh	7,190 14 7	9,448 1 6	{ 476 5 0 —6 3 0	{ 9,878 3 6

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sinking wooden <i>bachri</i> in big well at Jagsala, Chowkrey Poorani Basti ...	118 0 0	...	95 7 6	95 7 6
Repairs to wooden Bridge at Talao Raja Mull near Temple Girdharjee ...	13 0 0	...	11 13 0	11 13 0
Katli Inundation Cut Works ...	26,416 15 6	26,760 2 10	{ 5 3 0 —349 6 4	26,416 15 6
Repairing Deswa's well at Morabad ...	233 0 0	164 3 0	{ 70 12 3 —1 7 6	233 7 9
Do. Chattrivala Baori at Ganwar ...	273 0 0	115 5 6	147 6 3	262 11 9
Sinking wooden curb in well, Mile 12, Ajmer Road ...	56 0 0	...	31 5 0	31 5 0
Deepening 7 wells in Toda Rai Singh District ...	1,825 0 0	1,149 0 3	{ 466 10 6 —16 11 0	1,598 15 9
Pucca well for drinking purposes at Saltiwas, Tehsil Foda Rai Singh ...	669 0 0	103 9 6	414 4 6	517 14 0
Petty works at Cotton Press, Mandoor ...	4,167 0 0	3,217 9 5	{ 4 11 4 —49 15 9	3,212 5 0
Clearing big well and sinking wooden <i>bachri</i> in Baggechi well at the Residency, Jaipur ...	323 0 0	271 2 0	11 11 8	282 13 8
Removing and resetting Tap at Doria Sarad ...	7 6 1	...	7 6 1	7 6 1
Flowers for A. G. G's. Camp, Coronation Durbar, Delhi ...	...	...	{ 32 4 0 —32 4 0	32 4 0
Repairing eastern wall of the Peer house garden near the Mayo Hospital ...	...	...	{ 226 15 0 —226 15 0	226 15 0
Laying pipe from wells to the roadside for sprinkling water ...	...	...	{ 10 12 0 —10 12 0	10 12 0
Making Lutcha road in Sanganeer for reception of H. R. H. the Viceroy of India, Lord Curzon ...	187 0 0	...	187 0 0	187 0 0
Racquet Court at the Residency, Jaipur ...	3,398 0 0	2,770 10 0	26 3 6	2,796 13 6
Repairing rails and wagons at the garden house of Rao Bahadur Baba Kanti Chunder Mookerji ...	4,554 3 4	2,737 4 11	{ 1,216 2 9 —658 6 8	3,295 1 0
Reception of H. R. H. the Duke of Connaught ...	...	...	{ 2,358 12 5 —2,358 12 5	2,358 12 5
Cylinder and Press slide for Cotton Press, Mandoor ...	1,229 7 9	...	1,229 7 9	1,229 7 9
Making Chabootas for placing rain gauges at Tehsil Batauzila, Vazirpore and Toda Bloem ...	8 15 9	...	8 15 9	8 15 9
Lunatic Asylum—Renewing chopper of native doctor's quarter and filling Jhiri, etc. ...	...	...	{ 31 15 9 —31 15 9	31 15 9
Repairing Tramway materials received back from the garden house of late Rao Bahadur Baba Kanti Chunder Mookerji ...	3,301 5 6	...	{ 3,315 10 1 —14 4 7	3,301 5 6
Vegetables for Colonel P. D. Pank, I. M. S., Coronation Durbar, Delhi ...	...	...	{ 13 8 0 —13 8 0	13 8 0
Repairing Surveying Instruments of Rewari-Phalera Railway ...	85 9 0	23 4 6	30 11 0	53 15 6

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Laying pipe from wells and putting iron tubs on roadside for sprinkling water on reception of H. R. H. the Duke of Connaught ... ..	...	...	{ 17 6 10 —17 6 10	17 6 0 —17 6 10
Making arrangement for Plague Observation Camp near Horse Fair Road ...	...	...	{ 46 15 2 —46 15 2	46 15 2 —46 15 2
Sinking <i>bachri</i> in well of Koliyan Chowkrey Topkhana Hazoori ...	85 0 0	...	73 8 6	73 8 6
Repairing and deepening Mithi Baori at Kerli, Tehsil Todra Rai Singh ..	611 0 0	184 9 9	322 5 0	506 14 9
Consolidating kunkur on the platform at Cotton Press, Maudaor ..	189 0 0	...	136 7 6	136 7 6
Residency Jaipur—Clearing well near the office ..	...	...	{ 2 0 6 2 0 6	2 0 6 —2 0 6
Repairs to Akbari Minars	6,624 0 0	5,593 9 0	928 14 11	6,522 7 11
Sinking wooden <i>bachries</i> in the wells at old Jail, Jaipur ..	559 0 0	...	228 1 6	228 1 6
Clearing Jhalana Tank or Kund ..	257 0 0	...	98 6 3	98 6 3
Repairs to Bund Santokh Sagur ...	219 0 0	...	192 15 9	192 15 9
Chapper for Plague Observation Camp at Bohra-ka-Bagh for inspection of travellers from Nimahera Ilaka Tank	32 1 9	...	32 1 9	32 1 9
Altering water tap in Raola Sirkar Maji Sahiba Sri Dhurawatji ..	17 11 2	...	17 14 2	17 14 2
Making earthen bund near filter at Bund Nullah Amanishah ..	145 0 0	...	74 1 9	74 1 9
Repairs to iron bar at the top of Gandhi Mori Khoorah ... ..	...	...	{ 1 13 0 —1 13 0	1 13 0 —1 13 0
Making drystone pitching for Parua Ram and Chothoo mallee's field near Gandhi Mori	195 3 10	...	195 15 7	195 15 7
Clearing well outside of Band Master's Bungalow compound ..	14 0 0	...	12 6 6	12 6 6
Preparing signboard at Moti Katra Bazar on the wall of Rai Bijay Nathji ..	...	...	{ 1 15 3 —1 8 0	1 15 3 —1 8 0
Petty works at the Cotton Press, Maudaor ..	...	...	0 8 0	0 8 0
Plague Observation Camp, Jaipur ...	...	...	1 1 0	1 1 0
Deepening and making pucca well at the new hamlet Jatan ka Bas near Nasrida ..	662 0 0	...	59 15 6	59 15 6
Making a Chabutra for placing rain gauge at Tehsil Bamanwas ... ..	...	...	3 0 0	3 0 0
Total ...	2,06,400 6 8	{ 59,276 1 2 —114 1 10	1,15,579 7 11 —10,172 5 10	1,67,657 5 0 —1,088 3 7
IRRIGATION WORKS.				
Bhairon Sagur at Chandsen	1,74,883 0 0	1,49,519 5 0	21,322 0 5	1,70,841 5 5
Repairs to Tank Jalsian at Hindoun ...	14,059 0 0	10,081 13 6	1,113 12 4	11,499 9 11
New Tank at Baragaon Purgahana Mahiwa...	13,283 0 0	12,623 14 6	—20 14 8	12,602 15 10
Halolao Tank at Nivai	22,069 0 0	19,845 0 4	756 5 9	20,601 6 1
Bund Panwar necessary works and its channels	3,109 0 0	1,253 3 3	1,750 12 0	3,005 15 3

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sainthal Sagar	1,72,840 0 0	1,60,518 1 3	4,826 5 3	1,65,344 6 6
Repairs to District Tanks	19,600 0 0	...	16,322 8 5	16,322 8 5
Constructing a quarter for Mohafiz Bund Jai Sagar (Toond)	156 0 0	...	139 5 3	139 5 3
Bund Hingonia	30,853 0 0	15,535 14 3	8,477 4 5	24,013 2 8
Madho Sagar—Digging Canal	6,397 0 0	3,259 15 0	517 15 5	3,777 14 5
Ramgarh Irrigation works	5,64,579 0 0	4,74,604 15 0	27,609 6 8	5,02,304 5 8
Abpashi Establishment	22,388 0 0	...	17,700 14 4	17,700 14 4
Raising 3 ft. H. W. L. Tank Rupahalli to be at Malpara	6,803 0 0	4,090 6 7	2,121 10 3	6,212 0 10
Two P. sluices over Jhanpra village on 4th branch of Moran Sagar	600 0 0	356 13 6	199 9 1	556 6 7
Choru Sagar	23,880 0 0	20,880 11 3	1,247 1 3	22,127 12 6
Tank Datoli	3,297 0 0	2,428 2 6	868 13 6	3,297 0 0
Repairing and enlarging Kale Talao near Gobind	2,000 0 0	5,059 11 7	2,187 2 3	7,246 13 10
Bund Shendoongri near Chaksu	65,465 0 0	53,328 10 1	5,392 1 11	58,720 12 0
Constructing a Bund at Dabar Dubla	10,000 0 0	1,530 2 7	4,730 8 0	6,260 10 7
Repairs to Maroli Bund	19,797 0 0	1,656 13 4	17,777 3 8	19,434 1 0
Completing masonry corewall Tank Ban- era	5,500 0 0	4,074 2 1	1,429 14 9	5,404 0 10
Digging a canal from the river Mahashi near Ktagol to Chaparwara Sagar	64,460 0 0	34,209 13 10	18,965 6 3	53,175 4 1
Mahashi River. Making a P. weir for the South Canal of Chaparwara Sagar near Kheri	8,033 0 0	7,973 14 6	59 1 6	8,033 0 0
Clearing South High Level and the North High Level, Neofa Canal	758 0 0	...	758 0 0	758 0 0
Cart bridge over irrigation channel of Tank Ramiyawala on Ulwar and Gungajik-Rasta	109 0 0	15 13 6	76 2 9	92 0 3
Chandlai Supply Cut from Railway crossing, Amanisha ... ..	...	13,389 10 4	69 1 0	13,458 11 4
Raising 3 ft. Bund Chandlai	12,880 0 0	5,626 0 7	361 0 10	5,987 1 5
Sewai Madhopur Sub-Division Establish- ment	744 0 0	...	624 9 0	624 9 0
Head Sluice in Supply Cut Bund Ramiya- wala	116 0 0	...	94 3 0	94 3 0
Raising 1 ft. new Bund Chan	5,707 0 0	3,258 8 6	850 17 8	4,109 4 2
Boochara tank—Repairs and maintenance	1 558 0 0	...	1,809 9 9	1,809 9 9
Bund Jamwa Ramgurh do	1,486 0 0	...	1,089 5 6	1,089 5 6
Boochara Sub-Division Establishment	1,194 0 0	...	895 8 0	895 8 0
Sainthal Sub-Division do.	378 0 0	...	360 7 3	360 7 3
Constructing a bund at Dassie pargana Niwai	9,356 0 0	5,884 8 2	2,472 0 1	8,356 8 3

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902	From 1st September 1902 to 31st August 1903	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Lengthening P. wall of Dhana at Bund Goojar Thikarya	251 0 0	81 9 3	114 11 2	226 4 5
Digging a new channel from 4th branch of Moran Sagar to Bamanwas and making a pucca sluice	1,301 0 0	1,033 4 9	264 11 3	1,298 3 0
Pucca corewall in Ghooria Tank at Liwali	4,618 0 0	334 13 2	231 13 6	616 10 8
Repairing inner slope of Goojar Thikarya Tank, tehsil Lalota	250 0 0	77 11 9	121 13 11	199 12 8
Digging a new canal from Liwali Canal to Taijawala Tank	193 0 0	181 3 5	2 3 9	183 7 2
Two bridges over irrigation canal of Kharila and Naglao Tank at Bonli	232 0 0	176 6 3	23 15 9	205 6 0
Raising Binori and Daccan Sagar	3,927 0 0	2,906 11 6	1,020 4 6	3,927 0 0
Repairs to Koond Moran (preventing percolation)	451 0 0	250 4 9	74 12 0	435 0 9
Preparing 11 dhoras in mile 5 of Liwali Canal as per request of Patel Patwariyan of Liwali village	1,023 0 0	251 9 9	629 10 7	881 4 4
Making a pucca Sluice from Liwali Canal for filling water in Taijawala Tank at Bamanwas	90 0 0	72 10 3	8 7 0	81 1 3
Bridge over Johriwala Supply Cut in mile 10, Gangapur and Waripur Road	1,254 0 0	1,184 1 9	10 8 5	1,194 10 2
Gangapur Sub-Division Establishment	206 0 0	—	205 1 9	205 1 9
Repairs to Tank Bariwala (Bariyawala) at Kasba Odey Kalan, pargana Wazirpur	5,929 0 0	4,574 7 8	179 1 2	5,157 11 10
Ghat Bhundara Tank Establishment	209 0 0	—	252 0 0	252 0 0
Raising 2 ft. Pal Bund Baboota	5,593 0 0	3,293 5 2	46 2 6	4,039 7 8
Clearing silt and repairing Canals, Bund Neota and Parli	500 0 0	—	533 14 3	533 14 3
Mozabad Sub-Division Establishment	2,496 0 0	—	2,400 6 9	2,400 6 9
Dhobolao Tank at Naraina clearing and widening canals	1,770 0 0	718 7 6	729 12 9	1,529 4 3
Clearing and widening west canal with a pucca bridge on the way to Sakoon and clearing east canal of Dhobolao Tank at Naraina	670 0 0	319 8 6	268 12 6	618 5 0
Repairs to Pal Chaparwara Sagar	10,727 0 0	6,056 10 4	94 13 6	6,153 7 10
Remaining pucca necessary works over L. L. North Canal Chaparwara Sagar	1,326 0 0	247 3 9	618 6 3	885 10 0
Tank Dhamalia tehsil Malpura	94 0 0	516 14 9	213 1 6	769 0 3
Repairs to old Tank Ram Sagar at Chorli	371 0 0	92 8 3	271 15 0	311 7 3
Repairing and clearing canal of Bala Sagar at Sultana	75 0 0	13 10 0	31 6 3	43 0 3
Silt clearance of Neota Supply Cut	1,177 0 0	499 10 5	677 5 7	1,177 0 0
Preparing aqueduct for Kala Talao Canal on Nuliah Banda	350 0 0	121 13 9	227 2 3	319 0 0
Repairs to Kaligh Sagar Canal and P. Rubble works	4,683 0 0	2,379 15 9	1,770 2 6	4,150 2 3

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Repairs to Pal of Jaitpura Tank and making kutcha corewall ...	4,705 0 0	149 8 9	335 13 6	485 6 3
Chaparwara Sagar clearing canals ...	2,000 0 0	...	2,739 14 0	2,739 14 0
Works on Tori Sagar South Canal, a cart and two foot bridges, ten mud walls and one P. inlet sluice for Tank Ulyari ...	3,568 0 0	826 7 3	1,597 11 3	2,424 2 6
New Bund Hoshapura, tehsil Toda Rai Singh ...	10,285 0 0	8,823 5 8	2,633 6 4	11,456 12 0
Repairing and raising Pal of old Bund Baira, tehsil Toda Rai Singh ...	2,574 0 0	2,769 2 1	—195 2 1	2,574 0 0
Etagoi weir on the river Mahashi ...	17,059 0 0	17,047 0 6	1,418 15 2	18,465 15 8
Completing masonry corewall Tank Kerli..	9,490 0 0	9,905 14 2	506 1 6	9,399 12 8
Necessary works on Bund Thana ...	3,567 0 0	162 10 9	1,816 15 6	1,979 10 3
Tori Sagar clearing canals ...	1,500 0 0	1,578 10 0	—381 6 3	1,197 3 9
Clearing irrigation channels and widening top of patri, setting mile and Hazara stones and putting muliyas over Ram Sagar channels at Ganwar ...	615 0 0	...	365 0 6	365 0 6
Making two P. sluices on Talao Dhand at Nagar to Supply Noor Khan's Nari. ...	128 0 0	58 14 2	1 2 6	63 0 8
Repairs to old Bund Banthali near Lamba Bura (repairing and increasing Bund Lampura) ...	8,593 0 0	3,939 0 1	3,316 7 6	7,285 7 7
Repairs to Koond and Gao Ghat at Lamba Hari Singh ...	80 0 0	13 11 9	61 2 0	75 0 9
Excavating new duct to Mahadeopura village from Ram Sagar at Lamba Hari Singh ...	281 0 0	1 11 0	262 12 9	261 7 9
Moharrirs for guarding Western District tanks ...	1,176 0 0	...	1,094 7 6	1,094 7 6
Western District tanks establishment ...	2,001 0 0	...	2,068 12 0	2,068 12 0
Raising 2 ft. H. W. L. Tank Gharara ..	2,072 0 0	562 12 0	742 13 10	1,295 9 10
Gandal Sagar ...	...	...	{ —0 4 0 0 4 0 }	..
Moran Sagar Tank establishment ...	564 0 0	...	528 0 0	528 0 0
Repairs to Dhehra Tank at Malarna Chour... ..	2,225 0 0	1,640 7 1	18 2 6	1,658 9 7
Raising 3 ft. H. W. L. Tank Nasrida ...	9,915 0 0	13,215 6 1	—3,300 6 1	9,915 0 0
Widening and increasing channels, tank Nasrida ...	307 0 0	267 13 6	23 10 9	291 8 3
Making a syphon for carrying water from Ganwai tank to H. L. S. Canal Tori Sagar ...	163 0 0	...	134 9 3	131 9 3
Clearing dhora, Chaparwara Sagar Canal...	1,627 0 0	188 9 9	1,408 7 3	1,597 1 0
Eight number P. sluices at Akheypura, Sawarda and Paloo Khurd ...	776 0 0	...	750 0 6	750 0 6
Preparing pucca side sluice over Akheypura Branch ...	97 0 0	...	85 15 0	85 15 6
Making two falls on Main Canal Bund Khurr ...	636 0 0	574 9 10	10 2 6	584 12 4

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Making three irrigation sluices in Irrigation Canal of Kohara village of Sindholi Tank	396 0 0	311 4 7	8 8 6	319 13 1
Jai Sagar at Toond P. corewall to Bund ...	5,474 0 0	4,477 15 7	—211 10 8	4,236 4 11
Making a kunkur Khurra in Kaligh Sagar Canal mile 9	118 0 0	37 14 0	79 4 6	117 2 6
Clearing Mozabad Branch from Kaligh Sagar Canal	556 0 0	333 14 0	220 3 3	554 1 3
Culvert over irrigation channel of Bhanbolao tank at Gunwar	69 0 0	5 2 9	63 15 3	60 2 0
Kaligh Sagar clearing canals	1,000 0 0	...	43 15 4	43 15 4
Clearing silt and repairing canals at Sauganeer	500 0 0	...	185 3 6	185 3 6
Lewali Tank Establishment	276 0 0	...	276 0 0	276 0 0
Tori Sagar Canal outlet sluices 4 ft. wide ...	1,583 0 0	...	847 0 11	847 0 11
Raising 2 ft. H. W. L. Tank Gopipura near Punwar	1,911 0 0	...	1,666 15 4	1,666 15 4
Two bridges on Kalota and Kohara canals of Tank Sindoli on Jaipur-Buswa way ...	294 0 0	200 10 1	6 9 0	207 3 1
Silt clearance of Raisar or Khurr Main Canal	200 0 0	...	110 7 6	110 7 6
Clearing dhora and ducts from Kaligh Sagar Canal	1,615 0 0	872 0 3	555 3 9	1,427 4 0
Repairing and clearing Jhirna Canal	61 0 0	1 1 6	57 14 9	59 0 3
Making a small sluice for Kishenpura Tank	99 0 0	...	66 14 0	66 14 0
Putting earthen pipes in the L. L. North Main Canal Chaparwara Sagar for irrigation purpose	550 0 0	79 7 3	156 13 3	236 4 6
Bund Bari-ka-Thore at Bairath	27,025 0 0	24,907 6 1	547 2 9	25,454 8 10
Bridge over Kaligh Sagar Canal near Jhal on way to Jhag Naraina and Sambher ...	501 0 0	...	418 4 9	448 4 9
Silt clearance of duct from Akheypura Canal	520 0 0	411 2 3	104 3 10	516 6 1
Repairs to patri of Akheypura branch from Kaligh Sagar Canal	5,765 0 0	5,531 8 11	152 7 9	5,703 15 9
Silt clearance of Raiwala Main Canal	25 0 0	...	24 13 9	24 13 9
Constructing 5 khurras over Nasrida Main Canal	195 0 0	...	160 7 3	160 7 3
Extension of the River Mahashi South Supply Canal 10 miles towards Tori Sagar	26,180 0 0	16,076 10 10	45 8 10	16,122 3 8
Tori Sagar, mile 1, cart bridge and crossing sluice near Escape on L. L. South Canal...	1,112 0 0	...	791 14 0	791 14 0
Supply Cut to Bund Barial (small bund across nullah)	238 0 0	...	218 8 8	218 8 8
Bund Baragaon—Digging a canal with rajbaha	1,093 0 0	105 11 5	997 7 8	1,103 3 1
Constructing two K. houses for Mohafiz and a Chowki at Bund Khur...	772 0 0	...	747 5 4	747 5 4

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Increasing Mangalwara Dhora for irrigation purpose as per request of zamindars	169 0 0	...	127 2 0	127 2 0
Pucca sluice for Nazimwala Tank at Bamanwas	293 0 0	116 10 0	169 12 0	286 6 0
Pointing stone joints and resetting coping on Tori Sagar parapet coping on core-wall	106 0 0	1 6 0	97 15 6	99 5 6
Necessary works on Ram Sagar at Lamba Hari Singh	1,715 0 0	6 5 3	626 4 3	632 9 6
Bund Bugri or Noneria. Repairing and increasing Paul and adding a sluice ...	3,836 0 0	4,298 3 7	—462 3 7	3,836 0 0
Preparing 3 No. field water inlets on L. L. South Canal Chaparwara Sagar in first 6 miles and pucca corewall in mile 5 ...	1,032 0 0	...	959 0 3	959 0 3
Raising 3 ft. H. W. L. or 5 ft. Paul of Tank Kote Banar	12,211 0 0	4,317 10 0	3,867 4 9	8,214 14 9
Tank Pundrara, tehsil Toda Rai Singh P. corewall in K. Paul or embankment and 3 No. P. culverts over Irrigation Channel	4,272 0 0	4,160 7 6	97 9 0	4,258 0 6
Chaparwara Sagar L. L. South Canal.—Digging irrigation duct from Furhadpura Branch to Sri Ram Nagar	315 0 0	...	291 13 3	291 13 3
Preparing a new outlet sluice and digging a new duct from Ram Sagar at Lamba Hari Singh	1,197 0 0	...	337 6 1	337 6 1
Constructing a bridge on Sindholi Supply Cut on way to Dharampura	361 0 0	312 2 9	13 5 11	355 8 8
Preparing a small sluice at Kala Talao Naraina	142 0 0	...	119 1 3	119 1 3
Cart bridge on Bandolao Tank at Naraina ...	151 0 0	...	135 4 3	135 4 3
Raising corewall 2 ft. high above H. W. L. of Moran Sagar	1,498 0 0	...	1,236 7 9	1,236 7 9
Silt clearance of Chandlai Channel ...	50 0 0	...	{ —10 14 0 10 14 0	...
Digging channels, Bund Sanwatgarh ...	273 0 0	178 0 9	78 11 3	256 12 0
Necessary works on do. do.	327 0 0	261 2 6	61 7 6	322 10 0
Putting dry rubble stones in front of four escapes over Tori Sagar H. L. South Canal to prevent cutting the ground ...	155 0 0	...	112 15 3	112 15 3
Necessary works on Heelolao Tank at Kalunda	555 0 0	109 11 6	218 6 9	328 2 3
Excavating dhora from the canal of Baneria Tank for irrigating land of Rai Singhpura	135 0 0	...	114 0 3	114 0 3
Bund Thaonla. Raising 2 ft. H. W. Level... ..	3,433 0 0	3,775 10 7	—342 10 7	3,433 0 0
Negoh Sagar ... ..	...	7 14 3	—7 14 3	...
Repairs to Ganwai Tank at Kohara village	5,101 0 0	5,205 2 0	—104 2 0	5,101 0 0
Tank Rampura made up of two nadas between Jhoonpri and Bharni Nadi ...	2,500 0 0	3,023 11 3	—523 11 3	2,500 0 0
Repairing and enlarging old Ganwai Tank at Bagait	1,009 0 0	1,036 10 9	—27 10 9	1,009 0 0

APPENDIX B—continued.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Chaparwara Irrigation Works ...	5,09,385 0 0	5,05,815 6 11	—472 6 11	5,05,343 0 0
Lengthening 100 ft. masonry wall of waste-weir of Ram Sagar Malarna Chour ...	422 0 0	432 7 0	—10 7 0	422 0 0
Raising 2 ft. waste weir Moran Sagar ...	823 0 0	825 14 11	—2 14 11	823 0 0
Chaparwara Sagar necessary P. works over L. L. South Canal...	1,236 0 0	954 4 0	1 1 3	955 5 3
Two tanks Bodia and Dholai at Chakwara...	3,222 0 0	3,408 11 1	—246 11 1	3,222 0 0
Sindholi Tank pucca khurra of Irrigation Channel near Dantle ...	113 0 0	69 15 8	—4 0 0	65 15 8
Improving and extending Eastern Canal Madho Sagar ...	...	...	8 11 6	8 11 6
Repairs to Chandlai Supply Cut at Railway Crossing, Amanisha ...	50 0 0	...	43 10 3	43 10 3
Constructing a bund across Ghati Nullah Nos. 1 and 2 on the east and west to prevent sand from filling the Tori Sagar Canal ...	1,277 0 0	...	939 14 9	939 14 9
Benori and Lewali Supply Cut...	2,122 9 4	3,250 14 3	—1,195 15 2	2,054 15 1
Preparing Agur Sagar tehsil Mozabad ...	3,319 0 0	2,751 14 8	70 12 9	2,822 11 5
Pucca necessary works on Kaligh Sagar Canal ...	2,565 0 0	...	643 4 9	643 4 9
Tori Sagar setting wheel gate with counterpoise weights on bridge at the head of L. L. South Canal...	105 0 0	...	62 11 1	62 11 1
Repairs to and clearing Chandlai Supply Cut ...	...	...	982 5 3	982 5 3
Setting earthen pipes in Naya Sagar Canal,	120 0 0	25 8 0	91 1 9	116 9 9
Repairing Kerawal Sagar Canal and preparing pucca aqueduct in mile 5 and a kunker khura near Chainpura village ...	678 0 0	...	158 0 6	158 0 6
Remaining works on Neota Canal ...	...	...	—272 15 10	—272 15 10
Preparing a new sluice for Sri Ram Nagar for irrigation as per request of zemindars ...	100 0 0	...	18 5 0	18 5 0
Making sluice in 7th branch of Moran Sagar ...	212 0 0	45 15 0	94 7 3	140 6 3
Making two P. sluices in branch Nos. 5 and 6 of Moran Sagar ...	343 0 0	...	176 14 0	176 14 0
Raising 2 ft. H. W. L. Tank Islampur ...	8,657 0 0	7,469 11 6	976 9 10	8,445 5 4
Preparing bridge over Neota Supply Cut near Dham Koomharan ...	755 0 0	619 8 9	135 7 3	755 0 0
Bangunga Main Canal Silt. Clearance of...	...	—5 0 6	5 0 6	...
New Bund Lamba Hari Singh.—Increasing corewall and raising 1 ft. H. W. Level ...	8,047 0 0	7,754 9 1	292 6 11	8,047 0 0
Repairs to Heelolao Tank at Toda Rai Singh ...	1,331 0 0	1,872 7 5	—491 7 5	1,331 0 0
Chaparwara Sagar Canal erecting sluice gates with counterpoise weights overhead pulley ...	...	101 5 7	—101 5 7	...

APPENDIX B—concluded.

Name of work.	Amount sanctioned.	EXPENDITURE.		
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Chaparwara Sagur. Repairing bridges and kutchia inlets over L. L. North Canal ...	454 0 0	488 11 0	—383 10 0	105 1 0
Works at Madho Sagur Ghata Garowli ..	...	146 15 10	—146 15 10	...
Bund Ram Sagur at Choru. Repair to pal and P. sluice ...	395 0 0	732 10 6	—387 1 3	345 9 3
Kaligh Sagur Canal branch to Akheypura irrigation and crossing sluices ...	168 0 0	267 7 10	—90 7 10	168 0 0
Compensation of wells at Madho Sagur Ghata Garowli ...	6,862 0 0	6,979 15 4	—117 15 4	6,862 0 0
Raising 3 ft., i.e., from 7 to 10 ft. Bund Benori Sagur ...	786 2 6	...	—988 2 5	—988 2 5
Tori Sagur stock ...	...	...	—7 0 6	—7 0 6
Works on Ram Sagur at Lamba Hari Singh	...	13 7 9	—13 7 9	...
Chaparwara Sagur—Increasing L. L. South Canal preparing P. fall and excavating three new Dhoras ...	807 0 0	378 9 3	72 13 0	451 6 3
Remaining works on Nasrida tank (raising 3 ft. H. W. L.) ...	516 0 0	...	304 5 2	304 5 2
Cart bridge over Kaligh Sagur Canal near Shankarpura village ...	603 0 0	...	33 14 6	33 14 6
P. cart bridge on west canal of Dhololao Tank at Naraina ...	111 0 0	14 15 9	95 7 9	110 7 6
Raising 3 ft. Bund Sainthal Sagur ...	13,434 0 0	9,988 6 9	3,445 9 3	13,434 0 0
Pucca quarter for Mohafiz Bund Gandal ...	270 0 0	...	0 12 0	0 12 0
Repairs to diverting spur of the Nallah to Bumb Talao at Malpura ...	172 0 0	...	96 7 6	96 7 6
Preparing kutchia Nath in new tank at Mandi for convenience of public ...	387 0 0	341 0 6	38 7 6	379 8 0
Leveling Nath of Pall Bund Lamba Hari Singh ...	87 0 0	...	39 8 3	39 8 3
Supply Cut to Rampura Tank tehsil Toda Rai Singh ...	1,069 0 0	...	111 14 0	111 14 0
Silt clearance of Sanganeer Anicut ...	100 0 0	...	1 15 9	1 15 9
Refund of cost of 4 No. Hazara stones stolen from canals of Bund Khurr ...	5 12 0	...	5 12 0	5 12 0
Repairs to embankment of Gothra Tank ...	219 0 0	...	2 1 6	2 1 6
Clearing ducts north canal Tori Sagur ...	...	...	35 9 9	35 9 9
Chaparwara Sagur works on North Canal...	4,470 0 0	...	1,863 6 0	1,863 6 0
Digging canals for irrigation purposes from both sluices of Gaitolao Tank ...	750 0 0	49 0 0	291 7 9	343 7 9
Total ...	...	17,35,440 3 5 —5 0 0	2,25,465 13 4 —11,067 0 6	19,51,102 2 6 —1,268 2 9

APPENDIX C.

Statement of Roads and Lines of Communications in the Jaipur State for the year ending 31st August 1903.

Name of Road.	Length in Miles.		Cost of maintenance for the year.	Extensions, if any.	Average cost of making a new road per mile.	Average cost of maintenance.	REMARKS.
	Metalled.	Unmetalled.					
In the city and environs	35 06	69 00	Rs. a. p.				
Dosa via Lalpota to river Chambal	17 00	...	40,486 6 2				
Agra road including Naila section and a branch to Mahwa	...	...	8,765 3 4				
Dispensary	81 05	...	17,919 9 7				
Jhir Station Road, R. M. R.	0 87	...	...		
Jakwara Station Road, R. M. R.	0 52	...	...		
Ajmer Road	62 00	...	12,135 0 0				
Jaipur to Tonk Road	47 00	...	21,368 4 11				
Jagatpura Road	3 02	...	...		
Roads at Madhogani, Bamlikui	0 43	...	...		
Sheelaapura Station Road	0 15	...	...		
Chaksu	2 59	...	...		
Mandaur and Kerowli Road	43 00	...	15,762 4 10				
Hinduan and Gangapur Road	...	21 00	...				
Gangapur and Lalpota Road	...	27 00	882 4 9				
Deoli Road (Jaipur Section)	...	16 00	252 6 0				
Rajmahal and Deoli Branch	...	8 00	553 3 0				
Gangapur to Bharoti Branch	...	27 01	162 1 6				
Kotlioon and Lalpota "	...	25 00	65 12 6				
Naraina and Malpura "	...	38 63	677 10 3				
Dasl Station Link "	...	1 13	...				
Total	282 50	235 70	1,31,920 2 10	Nil.	The average cost of a new road 36 ft. wide, centre 12 ft. metalled with kunkur 3 inches thick, is Rs. 3,000.	The cost of maintenance divided by total number of miles metalled only.	With the exception of roads in the city of Jaipur, which are from 50 to 100 ft. wide and are metalled and paved on both sides, all the roads are 36 ft. wide, of which the central 10 ft. is metalled and the rest is of earth. The Jaipur-Tonk Road is metalled in a width of 12 feet. Most of the nullahs are unbridged excepting on the Agra and Ajmer Roads.

APPENDIX D.

Statement of Imperial Works executed from 1st September 1902 to 31st August 1903.

Name of work	Amount Sanctioned	Amount Expended.			REMARKS.
		Up to 31st August 1902.	From 1st September 1902 to 31st August 1903.	Total.	
	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
<i>Government Telegraph Office, Jaipur.</i>					
1. Repairs	140	...	113 7 9	113 7 9	Estimate for Rs. 140. Sanctioned by the Superintending Engineer, Rajputana Circle, vide his letter No. 2240 R., dated 9th June 1902.
2. Paving signal and receiving rooms	182	...	150 4 0	150 4 0	Estimate for Rs. 182. Sanctioned by the Executive Engineer, Ajmer Provincial Division, vide his No. 5134, dated 16th June 1902.
3. Putting a wooden frame and window in skylights in the signal room	17	...	2 12 9	2 12 9	Estimate for Rs. 17. Sanctioned by the Superintending Engineer, No. 3554 R., dated 8th July 1903, through the Executive Engineer, Ajmer Provincial Division.
Repairs to outhouses attached to the Residency Hospital, Jaipur	135	2 5 0	84 4 0	106 10 3	Estimate for Rs. 135. Sanctioned by the Superintending Engineer, No. 3109 R., dated 26th July 1903.
Repairs to Post Office, Mahara	41	...	32 2 6	32 2 6	Estimate for Rs. 41. Sanctioned by the Superintending Engineer, No. 5247 R., dated 8th December 1902.
Total	...	22 5 0	382 15 9	405 5 3	

Statement of Irrigation for the Raj year ending 31st August 1903 (Sambat 1959),

Number.	Name of work.	OUTLAY.				High water level.
		Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1902-03.	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in.
1	Bhao Sagur	40,423 0 5	...	40,423 0 5	19 2 6	14 0
2	Ram Sagur				10 5 10	50 0
3	Bund Talao ... ..				...	8 0
4	Man Sagur ... ..				...	30 0
5	Khonagore	2,638 9 2	...	2,638 9 2	30 4 0	12 0
6	Koonthara	10,615 8 6	...	10,615 8 6	...	9 0
7	Neota Bund, Ram Sagur	1,95,577 15 7	921 3 6	1,96,499 3 1	914 11 0	16 0
8	Chandlai	1,11,051 7 7	430 1 10	1,11,481 9 5	1,041 16 9	12 0
9	Banganga Weir and Canal	60,403 7 11	...	60,403 7 11	...	...
10	Berasima	16,431 2 9	...	16,431 2 9	...	...
11	Raiola	24,854 3 10	158 8 10	25,012 12 8	314 15 1	21 0
12	Bund Raisar Khur ...	1,16,964 11 5	884 14 3	1,17,849 9 8	139 9 6	40 0
13	Jetpura Tank	7,122 3 7	...	7,122 3 7	363 7 9	10 0
14	Benekhar	2,926 14 0	...	2,926 14 0	6 5 3	8 0
15	Bandolao	15,575 7 2	135 4 3	15,710 11 5	9 14 3	8 0
16	Bhaosa	2,522 6 1	...	2,522 6 1	2 10 6	8 0
17	Dhobolao Nirana ...	51,747 10 11	1,145 1 0	52,892 11 11	2 2 3	12 0
18	Kala Talao	5,770 1 6	346 3 6	6,116 5 0	18 0 9	8 6
19	Bhora-ka-Dand	3,159 5 6	...	3,159 5 6	5 15 0	9 0
20	Naya Sagur, Mozabad ...	17,643 13 6	91 1 9	17,734 15 3	129 15 0	13 0
21	Bankia Churu	5,511 0 8	...	5,511 0 8	26 12 9	6 6
22	Ram Sagur Churu	6,088 8 4	...	6,088 8 4	113 0 6	5 0
23	Kagia Phagi	3,237 8 2	...	3,237 8 2	2 5 6	6 0
24	Kanolao Phagi	9,523 7 2	...	9,523 7 2	10 2 3	5 0
25	Ram Sagur Phagi	4,711 5 10	...	4,711 5 10	17 7 6	5 0
26	Bujesli Phagi	13,777 13 9	...	13,777 13 9	75 8 6	9 0
27	Teelalao Phagi	11,181 11 7	...	11,181 11 7	3 1 0	5 0
28	Ram Sagur Madhorajpura	7,185 8 4	...	7,185 8 4	14 1 0	6 0
29	Nimla P. Weir	8,556 0 1	...	8,556 0 1	7 8 0	15 0
30	Kaligh Sagur	2,89,015 2 4	2,040 12 6	2,91,055 14 10	3,932 2 11	26 0
31	Lambia Chaksu	3,708 1 7	...	3,708 1 7	4 11 6	10 0
32	Ram Sagur Ganor	1,21,564 4 6	...	1,21,564 4 6	368 8 0	11 0
33	Bhambolao Ganor	9,734 11 5	63 15 3	9,798 10 8	6 2 6	8 0
34	Lamba Large Hari Singh	55,860 7 10	1,612 8 10	57,473 0 8	264 4 0	15 0
35	Borara Ram Singhpura ...	4,260 11 2	...	4,260 11 2	25 15 0	6 0
36	Nasrida Bund	30,870 5 7	594 11 11	31,465 1 6	23 2 9	10 0
37	Subhdand Sinodia	6,790 11 1	...	6,790 11 1	2 11 6	10 0

DIX E.

received from the Durbar, showing the Outlay by the Engineer and the Returns.

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percentage on capital outlay.	Total amount realized up to end of August.	No.
		No. of highas irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Big. bis	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
10 9	6 0	102 19	100 15 9	201 15 6	...	302 15 3	...	...	1
27 0	18 0	...	...	...	...	...	...	...	2
...	...	0 11	0 11 0	1 6 0	...	2 1 0	0.75	53,499 14 9	3
...	...	...	...	...	...	...	...	...	4
2 0	4 0	31 3	20 0 0	20 3 6	7 8 0	47 11 6	1.81	1,784 7 9	5
4 6	7 0	...	100 0 0	...	...	100 0 0	0.94	4,606 14 6	6
10 3	9 3	529 14	307 1 0	1,393 8 0	15 4 0	1,795 13 0	0.91	1,11,760 0 3	7
6 6	...	...	...	330 3 0	22 8 0	352 11 0	0.31	1,29,004 14 9	8
...	...	...	Returns are included in No. 146.			...	...	...	9
...	...	...	Tank is in charge of the Zennai Deorhi at present.			...	...	4,030 10 0	10
16 6	18 6	1,390 8	1,163 7 3	2,100 8 0	95 9 6	3,419 8 9	13.67	23,273 15 0	11
22 0	25 0	1,501 3	1,475 1 6	2,221 0 0	85 15 6	3,782 1 0	3.20	1,47,219 6 3	12
4 9	2 0	61 6	48 10 0	197 9 3	1 0 0	247 3 3	3.46	9,535 12 9	13
...	...	25 0	...	40 0 0	2 0 0	42 0 0	1.43	1,301 6 3	14
6 0	5 0	296 14	76 1 0	281 0 0	8 1 0	365 2 0	2.33	7,587 13 9	15
4 6	3 6	13 10	4 3 0	14 0 0	17 9 6	35 13 0	1.42	1,326 13 0	16
6 10	4 6	550 15	210 11 6	796 8 0	29 15 3	1,037 2 9	1.96	39,561 2 0	17
4 10	3 6	165 9	56 6 0	216 4 0	2 8 0	275 2 9	4.49	4,818 13 9	18
5 0	3 0	116 13	63 15 3	265 0 0	0 12 0	329 11 3	10.44	6,083 3 0	19
11 1	9 2	1,874 16	1,558 9 3	4,550 0 0	76 5 0	6,184 14 3	34.87	1,01,895 2 6	20
6 0	3 3	494 10	320 4 0	579 4 0	6 10 6	915 2 6	16.51	21,580 0 9	21
2 8	...	221 19	11 12 6	221 15 0	...	233 11 6	3.84	12,705 14 0	22
3 3	1 0	...	...	...	3 6 0	3 6 0	0.09	3,016 9 3	23
2 6	1 0	558 10	149 12 6	852 13 6	5 8 0	1,008 2 0	10.58	31,912 0 6	24
5 0	3 0	807 1	134 10 3	1,142 2 3	2 0 0	1,278 12 6	27.14	21,022 10 0	25
6 0	5 6	493 11	222 3 0	879 10 3	11 0 0	1,112 13 3	8.07	17,213 10 9	26
2 3	...	84 3	15 4 3	139 6 3	2 0 0	156 10 6	1.40	13,479 3 3	27
2 8	1 10	25 18	9 2 0	73 13 0	35 6 0	118 6 3	1.64	10,344 10 3	28
7 0	9 0	...	50 0 0	...	4 6 0	54 6 0	0.63	1,582 1 0	29
22 6	13 6	3,082 9	2,493 14 0	8,036 6 0	205 6 0	10,735 10 6	3.69	6,40,600 9 6	30
5 3	4 0	119 11	82 3 0	186 1 0	4 4 0	272 8 9	7.36	16,401 2 9	31
6 6	3 0	196 6	119 3 0	302 9 6	103 10 6	615 7 0	0.50	41,361 8 3	32
4 8	2 6	42 5	26 6 6	84 8 0	7 4 9	118 3 3	1.29	15,976 13 9	33
8 6	8 0	1,007 4	664 4 0	2,014 6 6	38 1 9	2,716 13 0	4.72	79,969 15 9	34
3 6	2 6	163 7	103 5 3	336 11 0	3 4 0	443 4 3	10.39	6,385 15 0	35
7 9	5 0	689 17	451 15 3	268 12 0	9 1 6	729 12 9	2.32	24,207 0 6	36
2 6	3 0	36 11	12 13 0	14 13 3	1 14 0	29 8 9	0.44	6,964 10 6	37

Number.	Name of work.	OUTLAY.				High water level.
		Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1902-03.	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in
38	Khedolao	5,060 5 4	...	5,060 5 4	11 9 6	6 0
39	Gangalao Toda Rai Singh	9,566 12 5	...	9,566 12 5	2 9 0	10 0
40	Karoria	3,487 1 5	...	3,487 1 5	...	18 0
41	Rathoria	2,426 8 7	...	2,426 8 7	0 10 0	10 0
42	Sandla	15,491 8 6	...	15,491 8 6	29 7 9	10 0
43	Morla Sriram Nagur	9,025 14 6	18 5 0	9,043 3 6	80 1 4	7 0
44	Bala Sagur Kankarwall	2,916 6 2	...	2,916 6 2	...	9 0
45	Beebolao Bas Ganethi	3,567 15 11	...	3,567 15 11	3 0 0	7 0
46	Saitiwas	6,567 1 4	...	6,567 1 4	19 3 3	15 0
47	Thaola	38,512 12 3	1,816 15 6	40,329 11 9	15 3 6	11 0
48	Panwar	85,036 8 5	1,750 12 0	86,787 4 5	39 3 3	14 0
49	Tori Sagur	6,18,478 8 10	5,152 11 1	6,23,631 3 11	4,017 0 9	30 0
50	Kiraol Sagur	1,02,863 3 6	...	1,02,863 3 6	108 7 6	14 0
51	Bhambolao Toda Rai Singh	541 7 0	...	541 7 0	2 2 0	6 0
52	Jharana	1,985 7 0	...	1,985 7 0	59 12 9	7 0
53	Dangurthul	11,474 7 2	...	11,474 7 2	...	...
54	Rawatwala Chaksu	11,890 0 7	...	11,890 0 7	19 11 1	11 0
55	Gastolao	5,992 10 8	291 7 9	6,283 2 5	...	7 0
56	Namolao Barn... ..	1,633 15 10	...	1,633 15 10	10 0 0	6 0
57	Do, Chota	958 9 6	...	958 9 6	...	6 0
58	Bijey Sagur Baswa	11,571 13 3	...	11,571 13 3	21 0 0	8 0
59	Koond Moran	1,978 9 3	...	1,978 9 3	74 12 0	...
60	Roop Sagur Shendoli	24,703 4 0	101 5 7	24,804 9 7	172 10 5	16 0
61	Madho Sagur Gerowli	1,93,882 5 7	18,156 14 9	2,12,039 4 4	996 10 10	30 0
62	Moran Sagur	1,72,358 12 7	2,060 13 10	1,74,419 10 5	500 3 11	17 0
63	Kot Hindown	23,002 14 6	...	23,002 14 6	...	5 6
64	Horla	5,265 0 3	...	5,265 0 3	16 7 3	5 0
65	Naharkhora	6,942 3 8	...	6,942 3 8	6 4 11	8 0
66	Salampur	3,570 6 11	...	3,570 6 11	...	5 0
67	Seekanderpur... ..	8,521 13 9	...	8,521 13 5	...	9 0
68	Jatwala Hindown	10,055 7 9	...	10,055 7 9	6 14 0	7 1
69	Maiswa Hindown	36,894 13 0	...	36,894 13 0	107 14 11	11 0
70	Futteh Sagur	14,475 9 3	...	14,475 9 3	410 5 1	17 0
71	Bishan Samand Ghat Bhundry	53,506 2 11	...	53,506 2 11	84 3 2	26 0
72	Howda Hali	21,509 7 6	...	21,509 7 6	199 12 9	14 0
73	Jhunki	2,825 11 8	...	2,825 11 8	4 2 0	5 0
74	Shumspore	8,659 6 6	...	8,659 6 6	3 0 0	9 0

DIX E—(continued).

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percentage on capital outlay.	Total amount realized up to end of August.	No.
		No. of bigas irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Dig. bis.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
3 0	...	34 15	0 12 3	27 10 0	2 8 0	30 14 3	0-61	4,998 10 0	38
7 6	4 0	14 18	...	14 0 0	3 2 0	17 2 0	0-17	3,131 4 3	30
12 0	...	...	Water reserved for drinking purposes.			...	...	2,760 14 0	40
4 6	1 0	...	...	...	0 4 0	0 4 0	0-01	4,821 14 0	41
5 6	2 0	127 13	54 2 6	62 0 0	13 8 0	129 10 6	0-83	18,733 10 9	42
4 6	5 0	125 13	79 0 3	181 8 0	6 8 0	267 0 3	2-95	5,281 9 0	43
7 0	4 0	18 18	2 7 0	32 13 6	0 8 0	35 12 6	1-23	4,247 5 9	44
4 6	2 0	99 1	64 2 6	70 6 0	13 4 0	147 12 6	4-21	6,925 4 0	45
11 0	10 0	30 5	24 12 6	60 8 0	5 0 0	90 4 6	1-37	6,825 11 6	46
5 11	5 2	1,375 2	833 3 6	1,662 14 0	3 0 0	2,499 1 6	6-19	57,973 0 0	47
12 0	5 0	293 12	89 3 3	402 0 0	9 12 0	500 15 3	0-57	58,714 11 3	48
13 10	13 10	2,695 13	2,253 1 6	5,271 8 6	140 5 6	7,664 15 6	1-22	6,43,083 4 3	49
6 0	3 0	632 15	286 14 0	1,277 8 0	9 7 0	1,573 13 0	1-53	62,310 13 6	50
6 0	1 0	4 5	2 10 6	1 1 0	0 10 0	4 5 6	0-79	495 13 3	51
...	...	...	...	...	4 0 0	4 0 0	0-20	1,684 15 6	52
...	...	Tank is in the charge of Jagirdar.			...	...	...	7,294 7 0	53
6 2	2 0	19 4	10 6 3	42 3 6	13 0 0	65 9 9	0-55	13,945 0 6	54
8 5	3 0	...	1,805 0 0	...	12 0 0	1,817 0 0	23-90	18,296 13 0	55
5 0	1 0	...	301 0 0	...	...	301 0 0	18-42	3,153 12 6	56
...	...	...	...	...	...	...	...	918 12 9	57
3 0	8 0	367 13	...	472 0 0	29 2 0	501 2 0	4-32	10,354 8 6	58
...	...	...	79 13 0	...	...	79 13 0	4-04	16,661 4 3	59
9 7	...	Returns are included in No. 142.			...	...	...	...	60
20 6	10 0	1,864 2	1,861 14 6	11,670 0 9	64 15 0	12,906 14 3	6-12	1,69,867 5 3	61
17 0	13 6	12,868 0	13,801 15 0	31,254 0 9	132 13 0	45,188 13 6	25-90	8,42,041 1 0	62
...	4 0	178 17	...	255 12 6	38 14 0	294 10 6	1-28	11,447 8 0	63
...	...	...	...	...	2 0 0	2 0 0	0-03	16,670 14 0	64
...	...	18 7	7 8 3	45 8 9	3 8 0	56 9 0	0-82	2,787 2 0	65
0 6	...	...	...	...	...	...	...	970 4 0	66
1 0	6 0	...	...	100 0 0	42 4 0	142 4 0	1-66	5,044 11 6	67
6 0	4 8	187 17	76 13 9	217 0 0	302 0 0	595 13 9	5-92	18,109 5 6	68
3 0	11 0	711 6	774 2 6	8,190 0 0	61 0 3	9,025 2 9	24-46	48,958 8 0	69
10 6	15 6	2,031 7	1,357 3 3	12,427 11 9	67 6 6	13,852 5 6	95-68	1,42,630 10 0	70
8 9	13 0	3,325 5	1,893 11 0	16,161 10 9	94 11 0	18,142 0 9	33-90	2,29,405 4 9	71
10 9	11 0	1,096 5	686 12 6	3,499 0 9	5 0 6	4,100 13 9	19-48	41,848 7 6	72
...	4 6	...	201 0 0	...	7 8 0	208 8 0	7-39	9,062 15 6	73
3 0	7 0	...	...	115 0 0	3 0 0	118 0 0	1-36	3,1-5 8 6	74

Number.	Name of work.	OUTLAY.				High water level.
		Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1902-03	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in.
75	Telanwala Wazirpore ...	9,312 15 8	...	9,312 15 8	2 1 0	6 0
76	Ram Talao, Wazirpore ...				4 3 0	6 0
77	Bara Talao, Wazirpore ...				13 4 6	6 0
78	Nimazwala, Wazirpore ...	527 13 0	...	527 13 0	1 5 0	3 0
79	Jhoriwala ...	17,301 11 5	10 8 5	17,311 3 10	60 3 9	7 0
80	Jeoli ...	14,455 2 8	169 12 0	14,624 11 8	...	...
81	Nazimwala ...					7 0
82	Mirzaporewala ...					5 0
83	Binoli Supply Cut ...	1,22,097 8 3	— 55 9 10	1,21,541 11 5	463 13 0	8 0
84	Moti Sagur Gaouri ...	25,662 15 1	...	25,662 15 1	58 1 7	8 0
85	Ghorla ...	4,915 6 6	281 13 6	5,197 4 0	...	5 0
86	Shunker Talao Goojur Thikria ...	9,190 0 8	144 11 2	9,334 11 10	100 11 3	8 0
87	Ram Sagur Maharna Chour ...	61,177 6 7	...	61,177 6 7	201 4 2	10 0
88	Dholra Tank ...	7,007 14 11	...	7,007 14 11	43 4 6	6 0
89	Doorga Sagur ...	27,338 1 7	...	27,338 1 7	9 15 0	6 0
90	Dhund ...				15 6 9	6 0
91	Jey Sagur Toond ...	43,008 3 4	— 102 5 5	43,885 13 11	172 3 4	8 0
92	Bhorati Bund ...	4,028 14 4	...	4,028 14 4	26 2 3	9 0
93	Nuglao Daonli ...	12,401 15 0	16 14 0	12,430 14 9	21 2 9	9 0
94	Kharila ...		12 1 9		1 12 0	9 0
95	Bheem Sagur... ...		...		...	9 0
96	Buchara ...	3,41,751 2 5	...	3,41,751 2 5	1,163 1 9	55 0
97	Sarmadi Phagi ...	3,864 12 10	...	3,864 12 10	...	6 0
98	Bar Solankiyan ...	5,580 15 8	...	5,580 15 8	7 5 3	5 0
99	Bartal Bund ...	5,282 1 8	...	5,282 1 8	...	...
100	Kalumda Tank Helolao ...	10,519 13 1	218 6 9	10,538 3 10	11 15 6	8 0
101	Roopaharby ...	12,701 9 2	2,121 10 3	14,823 3 5	127 10 3	7 0
102	Ganethi Bund ...	20,689 11 2	...	20,689 11 2	7 12 6	10 0
103	More Bund ...	5,060 3 10	...	5,060 3 10	6 7 6	6 0
104	Dhund Tank Nagur ...	1,902 11 1	4 2 6	1,906 13 7	59 0 6	5 0
105	Baneria Tank ...	9,237 13 10	543 15 0	9,781 12 10	21 6 0	4 0
106	Barwas Tank ...	1,353 5 6	...	1,353 5 6	4 1 0	4 6
107	Jacobabad Tank ...	3,108 13 0	...	3,108 13 0	75 13 3	3 0
108	Bankri Tank ...	2,332 9 5	...	2,332 9 5	1 14 6	8 0
109	Dhapawan ...	2,799 0 6	...	2,799 0 6	3 10 6	6 0
110	Haripura Bund ...	10,535 1 11	...	10,535 1 11	...	10 3
111	Buso Bund ...	9,934 11 8	...	9,934 11 8	...	...
112	Bhagwantgurb Bund ...	11,720 2 7	...	11,720 2 7	...	13 0

DIX E—(continued).

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percent- age on capital outlay.	Total amount realized up to end of August.	No.
		No. of bigas irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Big. bis.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
1 6	6 0	305 10	530 14 3	1,351 12 0	18 8 0	1,910 2 3	39-56	21,648 4 9	75
6 0	6 0	260 14	318 7 3	945 12 0	8 0 0	1,272 3 3		11,133 9 3	76
6 0	6 0	122 3	81 11 0	410 4 0	10 12 0	502 11 0		4,511 9 9	77
3 0	3 0	33 15	13 8 0	101 4 0	9 12 0	124 8 0	23-67	2,437 13 9	78
7 0	7 0	980 2	623 4 0	2,816 0 0	24 4 0	3,463 8 6	20-01	32,844 14 9	79
...	...	...	...	...	...	...	7-30	1,299 10 6	80
0 9	7 0	369 4	89 11 3	708 0 0	121 8 0	919 3 3		25,319 12 6	81
...	2 0	42 13	53 0 0	85 0 0	11 10 0	149 10 0		5,213 15 6	82
...	...	2,828 14	2,406 4 0	5,977 0 0	119 0 6	8,502 4 6	6-99	2,46,520 7 0	83
...	8 0	1,391 10	234 5 9	2,405 0 0	19 8 0	2,638 13 9	10-36	13,118 15 6	84
3 0	4 6	...	...	...	...	...	...	146 6 0	85
3 0	8 0	448 11	198 9 6	1,080 12 0	33 9 6	1,312 15 0	14-06	12,356 12 0	86
10 0	10 0	860 17	1,015 8 9	3,270 13 6	25 13 0	4,342 3 3	6-76	67,097 12 3	87
6 0	6 0	465 1	520 15 0	1,700 8 0	...	2,221 7 0	31-69	36,203 7 9	88
5 0	6 0	186 10	142 1 9	593 7 0	11 3 3	746 12 0	5-70	22,409 2 0	89
6 0	6 0	211 13	143 8 9	662 9 0	7 13 3	813 15 0		6,357 15 6	90
8 0	7 0	919 15	728 15 3	1,837 3 0	17 0 0	2,393 2 3	5-89	33,582 10 6	91
7 0	9 0	165 5	145 14 6	493 12 0	...	644 10 6	16-00	6,550 2 9	92
5 3	7 0	555 15	318 0 6	1,091 0 0	6 0 0	2,045 0 6	21-89	22,204 11 6	93
4 6	7 2	60 9	32 14 0	177 0 0	3 4 0	213 2 0		6,387 14 6	94
6 0	8 1	88 6	77 11 6	380 0 0	6 0 0	463 11 6		5,370 9 6	95
16 6	37 0	4,987 13	5,564 12 6	17,112 5 6	318 8 0	22,995 10 0	6-72	2,82,341 11 6	96
2 3	1 6	26 8	19 15 6	27 9 0	3 12 0	51 4 6	1-32	1,407 0 0	97
5 0	1 9	89 4	55 12 0	428 8 0	4 0 0	488 4 0	8-74	7,098 12 0	98
...	...	Tank is in charge of the Zenani Deorhi at present.					...	161 2 6	99
4 1	8 0	691 2	496 12 9	1,382 3 0	8 0 0	1,856 15 9	17-90	1,886 15 9	100
5 3	2 6	66 9	42 7 6	132 14 6	12 10 0	188 0 0	1-26	3,151 13 9	101
9 6	7 6	447 10	287 7 0	513 11 9	5 0 0	836 2 9	4-04	9,286 3 9	102
1 0	1 0	35 19	18 4 6	0 0 0	8 10 0	35 14 6	0-71	3,231 10 0	103
0 7	...	...	...	...	6 2 0	6 2 0	0-31	2,751 15 6	104
2 0	2 6	72 9	45 9 6	22 12 0	0 4 0	68 9 6	0-70	5,108 0 0	105
4 0	1 0	77 13	43 13 6	19 6 6	9 0 0	72 4 0	5-32	412 10 9	106
1 0	...	...	...	...	2 8 0	2 8 0	0-08	8,962 15 0	107
3 4	2 0	13 6	8 5 0	13 4 9	...	21 9 9	0-94	834 0 9	108
...	3 0	50 15	...	74 14 6	2 0 0	76 14 6	2-75	409 1 9	109
2 1	3 0	15 0	9 6 0	15 0 0	4 0 0	28 6 0	0-26	3,157 13 6	110
...	...	This is a protective work only.					...	4 0 0	111
...	...	...	...	...	22 8 0	22 8 0	0-19	486 4 9	112

Number.	Name of work.				OUTLAY.				High water level.
					Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1932-33.	
					Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in
113	Khari Nullah	...	...	...	15,667 0 2	...	15,667 0 2	2 10 0	10 0
114	Rabauta	...	...	...	12,528 1 6	46 2 6	12,574 4 0	11 4 6	8 0
115	Madhosinghpura	...	...	...	10,807 13 3	...	10,807 13 3	4 7 9	12 0
116	Naya Tolão, Lawali	...	...	...	14 276 2 8	...	14,276 2 8	—30 7 2	5 0
117	Dhunnawali Bunri	...	...	...	291 12 4	...	291 12 4	...	2 6
118	Gotrawala	...	...	...	126 7 1	...	126 7 1	2 1 6	3 0
119	Moti Sagur Churu	...	...	...	7,252 5 10	...	7,252 5 10	58 1 7	5 0
120	New Bund, Islampur	...	...	..	18,063 7 1	—10 15 0	18,057 8 1	26 10 6	6 0
121	Lambia Toda Rai Singh	...	...	..	1,509 13 2	..	1,509 13 2	1 13 0	6 0
122	Sainthal Weir	...	...	...	18,319 10 10	...	18,319 10 10	...	...
123	Minaka Lota	...	...	...	1,262 4 5	...	1,262 4 5	...	2 0
124	Matholao	...	...	...	6,684 7 6	...	6,684 7 6	13 14 6	6 0
125	Garara Bund	...	...	...	37,649 3 6	742 13 10	38,392 1 4	389 11 9	16 0
126	Chaparwara Bund	...	...	...	5,47,556 10 11	22,145 6 6	5,69,702 1 5	3,411 5 3	17 0
127	(Raj Bagh	...	...	...	7,461 3 3	...	7,461 3 3	185 3 6	...
	Gulab Bagh...	...	...	...		
	Ranjika	...	...	...		
	Matwali	...	...	...		
	(Sheopur and Bombala	...	...	...		
128	(Bishan Samund or Ghat	...	...	...	1,642 6 11	...	1,642 6 11	295 4 9	..
	Bhundari Supply Cut ... (Toda Bhim Canal)	...	...	...		
129	Dhundera	...	...	...	2,164 0 6	...	2,164 0 6	...	...
130	Jatoli Bund	...	...	...	3,496 2 8	...	3,496 2 8	...	8 0
131	Chan Bund	...	...	...	15,651 0 11	—202 6 9	15,448 10 2	8 3 3	5 0
132	Mohi Bund	...	...	...	17,601 1 11	...	17,601 1 11	8 9 6	6 0
133	Sultana Bund	...	...	...	7,279 13 4	...	7,279 13 4	31 6 3	5 0
134	Nasnota Bund	...	...	...	1,133 11 6	...	1,133 11 6	40 4 9	4 0
135	Chatterpura and Khatipura	...	...	...	2,539 14 7	...	2,539 14 7	0 14 3	4 0
136	Ramiawala Bund	...	...	...	2,966 3 2	170 5 9	3,136 8 11	8 15 6	9 0
137	Benoli Bund	...	...	...	30,669 2 11	32 2 1	30,701 5 0	...	17 0
138	Dakhen Sagur	...	...	...	14,798 1 0	...	14,798 1 0	...	10 0
139	Tank Chandia near Mozabad	...	...	...	3,895 9 9	...	3,895 9 9	3 12 0	4 0
140	Tank Dhamana	...	...	...	4,916 8 0	...	4,916 8 0	13 0 9	4 0
141	Kerli Sagur at Toda Rai Singh	...	...	...	18,362 12 8	—506 1 6	17,856 11 2	28 3 3	6 0
142	Sainthal Sagur	...	...	...	1,70,669 15 0	8,271 14 6	1,78,941 13 6	87 13 1	28 0
143	Pundrara	...	...	...	9,490 15 0	...	9,490 15 0	113 12 0	6 0
144	Sanwatgurh	...	...	...	10,498 5 6	140 2 9	10,638 8 3	36 2 9	6 0

DIX E—(continued).

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percentage on capital outlay.	Total amount realized up to end of August.	No.
		No. of bigas irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Dig. bl.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
6 3	7 0	281 8	75 0 0	412 8 0	5 0 0	492 8 0	3-14	7,443 15 0	118
4 6	3 9	153 10	89 13 0	440 0 0	21 8 0	551 5 0	4-38	7,246 9 9	114
10 5	4 3	86 16	46 10 9	269 5 9	12 0 0	329 0 6	3-03	8,347 0 3	116
1 0	4 0	Filled by Lawali channel and hence revenue is included in that of the channel.					...	...	116
...	...						...	...	117
...	3 0						...	...	118
2 9	1 6	138 6	22 10 0	188 4 9	2 4 0	213 3 3	2-03	3,373 3 6	119
4 0	1 0	121 13	63 3 6	119 9 6	4 8 0	187 5 0	1-03	1,984 5 9	120
4 0	...	...	...	...	...	...	...	296 6 0	121
...	...	Returns are included in No. 142.					...	...	122
...	2 0	...	...	...	...	...	...	...	123
5 0	2 0	429 4	34 0 0	713 11 9	9 10 0	757 5 9	11-32	4,708 3 9	124
13 3	13 4	1,691 16	1,410 1 3	2,706 13 3	44 15 0	4,161 13 6	10-84	32,086 1 6	125
4 6	3 9	3,331 18	2,675 8 3	7,573 9 3	96 10 0	10,345 11 6	1-81	1,67,967 5 6	126
...	...	21 0	10 8 0	42 0 0	...	52 8 0	44-83	2,00,770 11 0	127
...	...	24 9	6 0	49 14 6	...	55 0 6			
...	...	...	...	1,207 1 9	...	1,207 1 9			
...	...	638 8	180 7 0	855 0 3	...	1,035 7 3			
...	...	597 8	165 12 3	828 11 9	...	994 8 0	15-89	4,832 6 3	128
...	...	22 13	28 5 0	56 10 0	175 12 0	260 11 0			
...	...	...	...	...	...	...	...	16 0 0	129
...	2 6	33 0	...	72 8 0	6 0 0	78 8 0	2-23	237 10 0	130
4 0	3 0	106 12	77 1 6	143 3 6	2 8 0	222 13 0	1-44	660 12 3	131
0 2 1/2	1 0	436 3	...	873 11 0	36 4 0	909 15 0	5-17	1,220 7 6	132
1 6	1 0	101 3	45 0 3	101 11 9	4 0 0	150 12 0	2-07	3,331 6 9	133
4 0	...	...	...	...	...	...	...	...	134
...	...	Returns are included in No. 7.					...	...	135
8 0	7 9	12 7	22 15 0	18 8 0	8 12 0	50 3 0	1-59	1,495 6 3	136
15 0	10 6	Returns are included in No. 83.					...	...	137
...	...	...	...	...	3 4 0	3 4 0	0-02	8,631 1 3	138
...	...	...	...	...	1 8 0	1 8 0	0-05	5 8 0	139
0 3	...	14 4	8 14 0	28 8 0	4 0 0	41 6 0	0-83	69 14 0	140
4 10	2 0	...	...	...	6 12 0	6 12 0	0-03	562 4 0	141
26 0	26 6	2,296 14	3,005 8 6	2,616 10 0	241 1 3	5,893 3 9	3-29	81,774 11 0	142
0 6	2 0	75 0	57 13 6	20 8 6	2 8 0	80 14 0	0-85	2,243 4 0	143
5 6	1 6	100 0	...	90 0 0	...	90 0 0	0-45	297 14 0	144

Number.	Name of work.	OUTLAY.				High water level.
		Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1902-03	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in.
145	Negoh Bund	11,721 11 2	—7 14 3	11,713 12 11	7 14 3	...
146	Ramgurh Bund	4,75,463 0 0	27,699 6 8	5,03,162 6 8	1,094 6 0	61 0
147	Bari-ka-Thore at Bairath	24,910 6 1	547 2 9	25,466 8 10	5 7 6	15 0
148	Gundal Sagur	10,615 8 8	...	10,615 8 3	210 5 10	6 6
149	Khundar Sagur	2,313 9 8	...	2,313 9 8	...	...
150	Harbhagatpura Tank	4,627 14 11	...	4,627 14 11	4 11 0	5 0
151	Ghatialy Bund	4,322 15 3	...	4,322 15 3	6 11 3	6 0
152	Rundh Jagrampura Bund	5,495 7 10	...	5,495 7 10	19 15 0	5 0
153	Bala Sagur at Sakarwara village	6,095 13 9	...	6,095 13 9	57 11 3	5 0
154	New Tank at Manpura village	4,737 14 6	...	4,737 14 6	10 1 3	4 0
155	Bund Hoshapura, tehsil Toda R. Singh	8,848 9 2	2,633 6 4	11,481 15 6	111 9 0	7 0
156	New Bund at Gopipura near Punwar	1,584 15 3	1,666 15 4	3,251 14 7	8 10 6	3 0
157	Repairs to Bumb Talao at Nalipura	1,290 9 3	...	1,290 9 3	189 10 0	...
158	Heelolao Tank at Toda	1,881 7 5	...	1,881 7 5	9 0 0	...
159	Hingonia Weir	12,015 0 8	8,477 4 5	20,492 5 1	...	...
160	New Bund Uturna Thikana Dooni	3,948 5 7	...	3,948 5 7	...	6 0
161	Halolao Tank at Newai	19,863 0 1	756 5 9	20,619 5 10	25 15 0	11 0
162	Bhairon Sagur Thali	2,140 1 6	...	2,140 1 6	3 2 6	7 0
163	Barial Bund	2,431 5 11	218 8 8	2,649 14 7	23 4 9	...
164	Baragaon Tank	12,737 5 8	976 9 0	13,713 14 8	9 15 6	11 0
165	Jalsain Tank	10,094 13 6	1,413 12 4	11,499 9 10	...	...
166	Goonsar Tank	528 11 6	...	528 11 6	...	...
167	Bara Udaiwala Tank, Bariwala (Baniawala)	4,978 7 8	179 4 2	5,157 11 10	26 2 7	...
168	Nainwari Bund at Baoli	1,910 0 7	...	1,910 0 7	...	9 0
169	Sheo Dongri Bund	51,885 12 10	2,018 5 3	53,904 2 1	38 3 3	22 0
170	Renwal Bund	8,805 14 9	...	8,805 14 9	...	8 0
171	Mandi Bund	3,416 4 10	38 7 6	3,454 12 4	27 13 3	4 0
172	Kiria or Dwarkapura	6,603 7 9	...	6,603 7 9	6 5 3	6 0
173	Dholai Bund	662 10 1	...	662 10 1	9 15 3	5 0
174	Bodia Bund	2,845 7 6	...	2,845 7 6	7 14 0	8 0
175	Pichala Bund	2,959 5 8	...	2,959 5 8	1 14 3	3 0
176	Churu Sagur	20,870 7 0	1,247 1 3	22,117 8 3	14 6 9	8 0
177	Bagait Sagur	1,057 0 9	...	1,057 0 9	1 14 0	3 0
178	Sahadra Tank	3,627 11 10	...	3,627 11 10	218 11 6	4 0
179	Kala Nada Bund	5,285 3 4	...	5,285 3 4	9 15 3	6 0
180	Bhairon Sagur Chandsin	1,49,533 1 0	21,322 0 5	1,70,855 1 5	15 4 6	21 0
181	Kishanpura Tank	993 1 0	66 14 0	1,059 15 0	10 2 0	4 0
182	Katli River, Inundation Cut	25,944 13 3	...	25,944 13 3	...	...

DIX E—(continued).

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percentage on capital outlay.	Total amount realized up to end of August.	No.
		No. of bigas irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Big. bis.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
...	...	...	This work is incomplete.			...	...	...	145
36 0	28 0	8,203 1	9,731 10 0	9,752 15 3	401 8 6	19,886 2 6	3-05	88,311 14 6	146
14 3	10 0	...	...	...	0 0 0	0 0 0	...	123 12 6	147
...	6 6	154 7	96 4 9	300 0 0	0 15 0	397 3 9	3-73	3,137 8 0	148
...	...	...	Not an irrigation tank.			...	...	...	149
1 4	...	5 10	1 11 6	1 6 0	7 0 0	10 1 6	0-21	446 5 9	150
6 0	6 0	229 15	149 4 0	459 8 0	1 12 0	610 8 9	14-13	1,285 3 3	151
...	...	...	...	...	...	...	...	...	152
3 0	2 0	...	...	...	...	...	...	36 3 9	153
1 9	...	56 0	35 0 0	122 0 0	...	157 0 0	3-31	439 12 6	154
7 0	...	...	...	...	...	...	...	...	155
4 6	1 0	90 0	...	53 0 0	...	53 0 0	1-62	202 1 6	156
...	...	...	Not an irrigation tank.			...	...	...	157
2 0	...	40 0	...	60 0 6	...	60 0 6	3-19	60 6 6	158
5 0	...	...	...	...	...	...	...	14 13 0	159
...	...	...	Belongs to Thikanah Duni.			...	...	...	160
5 0	...	8 8	4 7 6	6 8 0	...	10 15 6	0-05	10 15 6	161
7 0	4 0	28 5	39 13 3	109 4 0	...	149 1 3	6-96	286 8 3	162
10 2 1/2	3 0	30 10	...	63 4 9	1 0 0	64 4 9	2-41	71 8 9	163
2 6	3 0	...	...	...	...	...	...	399 2 3	164
9 0	8 6	202 13	123 8 0	289 11 9	30 11 9	443 15 6	3-86	1,144 7 9	165
...	...	...	...	...	...	...	...	...	166
...	4 0	273 19	212 5 6	494 0 0	32 4 0	739 9 6	14-32	1,375 8 0	167
3 3	8 0	8 18	3 12 0	...	1 10 0	5 6 0	0-27	6 6 0	168
7 0	...	1 11	1 10 0	2 4 0	...	3 14 0	...	82 4 0	169
...	...	...	This tank is in charge of the Zenani Deorhi at present.			...	...	...	170
1 6	1 0	9 1	4 5 0	9 0 0	...	13 5 9	0-37	135 6 6	171
3 6	...	...	...	...	...	...	...	...	172
6 0	4 0	198 9	99 1 9	320 14 6	...	420 0 3	63-34	420 0 3	173
7 0	7 0	179 19	86 7 9	196 8 0	...	282 15 9	9-91	313 5 0	174
2 5	...	...	...	...	...	...	...	...	175
7 3	3 9	509 19	225 10 9	664 11 6	...	890 6 3	4-02	890 6 3	176
...	1 6	...	...	...	...	...	...	...	177
4 0	2 6	118 13	73 13 6	...	...	73 13 6	2-03	73 13 6	178
4 4	1 0	...	...	...	...	...	...	182 7 6	179
6 0	6 0	241 4	169 11 3	452 0 0	...	621 11 3	0-36	621 11 3	180
8 0	0 6	27 19	12 4 6	27 15 3	2 8 0	42 11 9	4-05	52 13 0	181
...	...	...	This work is the property of Jagirdars in Shikawati and is incomplete.			...	...	...	182

Number.	Name of work.	OUTLAY.				High water level.
		Expenditure up to last year.	Expenditure during the year on capital account.	Total on capital account up to date.	Expenditure on repairs during the year 1901-03	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Ft. in
183	Faridpura Koond ... ..	...	...	...	...	...
184	Bojala or Bainra Tank Toda Rai Singh ...	2,778 7 1	60 15 3	2,838 6 4	6 15 6	6 0
185	Datoli near Madhorajpura	2,439 1 6	914 8 9	3,353 10 3	72 8 0	...
186	Rampura Tank	3,029 13 9	111 14 0	3,151 11 9	22 14 0	...
187	Gorindi	1,501 0 0	...	1,501 0 0	10 3 6	...
188	Bund Bugri or Noharia	4,298 3 7	-33 12 6	4,264 7 1	4 4 0	...
189	Danthali near Lamba Bara	3,939 0 1	3,316 7 6	7,255 7 7	14 9 4	...
190	Ganwai Tank at Kohara village	5,205 2 0	...	5,205 2 0	112 0 8	4 0
191	Golairao Tank at Chaksu	161 5 6	...	161 5 6	...	...
192	Nazimwala at Daminiwas	832 11 4	...	832 11 4	172 12 6	...
193	Utter Sagur at Binoli	1,038 0 4	...	1,038 0 4	...	...
194	Ettagoi Weir on the River Mashu	17,017 0 6	1,418 15 2	18,465 15 8	...	...
195	Ram Chunderpura Bund ... ..	...	...	...	1 9 0	...
196	Dhamalia Tank	20 2 1	213 1 6	133 3 7	2 12 6	...
197	Agar Sagur	2,755 8 5	70 12 9	2,826 5 2	14 0 6	4 0
198	Kala Talao Gorindee	5,050 11 7	2,167 2 3	7,216 13 10	18 0 9	...
199	Dabur Dubba or Kala Doongri	1,330 2 7	4,730 8 0	6,260 10 7	...	...
200	Basai Bund, pargana Niwai	5,818 4 8	2,172 0 1	8,360 4 9	14 2 0	...
201	Halolao Tank at Chaksu	1,441 13 3	3,373 12 8	4,816 9 11	10 0 6	...
	GRAND TOTAL	55,56,997 8 3	1,50,591 4 8	57,10,589 12 11	21,065 6 9	...

DIX E—(concluded).

Height of water in 1903.	Height of water in 1902.	RETURNS FOR THE YEAR.					Percentage on capital outlay.	Total amount realized up to end of August.	No.
		No. of big has irrigated.	Amount of water-rate.	Amount of share of produce.	Miscellaneous.	Total.			
Ft. in.	Ft. in.	Dig. bis.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
...	...	Filled from Chaparwara Sagur by a duct.					...	...	183
...	101 0 3	184
1 6	...	49 3	18 0 9	68 11 0	1 0 0	87 11 9	2.62	87 11 9	185
...	186
1 0	...	14 6	4 7 6	14 4 9	...	18 12 3	1.26	49 11 0	187
0 6	2 6	23 17	14 14 6	47 11 3	0 10 0	63 3 9	1.47	63 3 9	188
1 0	2 0	...	...	...	3 0 0	3 0 0	0.01	3 0 0	189
1 6	1 6	61 15	23 11 0	16 5 0	3 0 0	18 0 0	0.92	77 14 3	190
...	...	This is not an irrigation tank.					...	...	191
...	192
...	...	This work is incomplete.					...	...	193
...	...	This work is in connection with supply cuts to other tanks					...	...	194
3 0	...	22 15	14 3 6	49 5 9	...	57 9 3	...	131 9 6	195
...	...	Remaining returns are included in No. 8 Chandlai tank.					...	...	...
...	196
2 6	1 9	...	...	...	...	...	...	...	197
4 6	...	7 2	2 3 6	12 12 0	...	14 15 6	0.29	11 15 6	198
...	199
...	...	6 13	2 1 3	12 2 0	...	11 3 3	0.16	14 3 3	200
4 0	...	139 15	44 12 3	513 6 3	0 14 0	559 0 6	11.69	559 0 6	201
...	...	81,945 10	70,251 5 6	2,00,861 1 6	3,936 12 0	2,75,052 3 0	4.72	51,61,352 8 6	

Note.—Tanks Nos. 10, 53, 99, 160, 170 and 182 are not at present in charge of the P. W. D.

APPENDIX F.

This Appendix describes the result of the irrigation season for the Raj official year from 1st September, 1902, to 31st August, 1903, or Sambat 1959.

The Abpashi Department is divided into two circles, each under a Zillabdar.

The Northern and Eastern Districts have been under Munshi Nand Kishore and the Southern and Western Districts under Lala Hira Lal.

2. In the Northern and Eastern Districts the irrigation commenced on 17th August, 1902, and continued up to 19th April, 1903, *i.e.* for a period of about eight months, and the total area irrigated was 53,460 bighas 1 biswa, which gives a daily average irrigation of two hundred bighas.

In the Southern and Western Districts the irrigation commenced from 15th August, 1902, and continued up to the 28th January, 1903, *i.e.* for a period of about five and a half months, and the total area irrigated was 28,485 bighas 18 biswas, which gives a daily average irrigation of 191 bighas.

The irrigation done in August 1902 was due to a long break in the rains, which necessitated some water being given in the *kharif* crop.

3. The following statement shows the Areas irrigated and the Crops grown:—

Crops.	NAME OF IRRIGATION CIRCLE.			
	Northern & Eastern.		Western & Southern.	
	Bighas.	Biswas.	Bighas.	Biswas.
Arhar	5	17	...	...
Bajra	163	10	97	3
Barley	15,059	17	9,826	13
Barley and gram	3,485	2	1,867	5
Carrot	81	14	17	1
Chari	32	16	...	...
Chillies	1	14	9	12
Cotton	3,024	4	3,823	17
Dhania (coriander seed)	12	18	2	16
Garden ... ..	...	...	23	1
Gowar	3	4	12	12
Gram	6,143	10	614	5
Jowar	561	6	161	8
Kachri	5	13	...	...
Kangni	5	19	3	11
Kodu	1	2	...	...
Maithee	17	7	142	19
Mandwa ... ..	...	...	15	3
Morla ... ..	...	...	12	6
Moth ... ..	...	...	21	19
Mucra	1,210	7	5,457	19
Mung	1	14	1	...
Opium	26	...	5	13
Rice	3,936	17	...	...
Rinjka (Lucerne)	7	16	...	...
Sar-oon	11	19	4	12
Singhara	1	5	...	...
Sugarcane	347	2	41	17
Til	229	10	67	17
Tobacco	72	5	18	17
Urad	5	...	...	...
Vegetables	181	9	147	1
Watering	67	14	417	4
Wheat	12,037	2	1,353	8
Wheat and barley	533	...	237	15
Wheat and gram	289	18	154	14
Zira (cumin)	2,219	16	677	1
Total	48,038	2	25,216	7

4. The following table shows the detail of the irrigation done and the crops raised :—

						Northern and Eastern.		Southern and Western.	
						Dig.	Bis.	Dig.	Bis.
Ry flow	...	...	...	...	...	45,826	13	21,986	4
„ lift	...	...	...	...	...	3,111	12	3,260	3
Total						48,938	2	25,246	7
Beds of tanks	...	...	...	...	...	4,521	19	3,239	11
GRAND TOTAL						53,460	1	28,485	18
Single crop	...	...	...	...	...	47,697	15	25,006	14
Double crop	...	...	...	...	...	1,240	7	239	13
Total						48,938	2	25,246	7
Khalsa	...	...	...	...	...	35,173	15	19,757	7
Jagir and oodick	...	...	...	...	...	13,764	7	5,489	0
Total						48,938	2	25,246	7

5. The Revenue collected on irrigation includes the following items :—

Items.						Districts	
						Northern and Eastern.	Southern and Western.
						Rs. a. p.	Rs. a. p.
WATER RATE	...	...	...	...	...	52,313 7 0	17,940 14 6
<i>Miscellaneous :—</i>							
Fine imposed for wasting water	...	...	Rs. a. p.	Rs. a. p.			
			682 12 3	86 14 6			
Cattle trespass	...	...	111 4 0	34 6 0	...		
Miscellaneous	...	...	142 1 0	58 4 0	...		
Total						...	
			936 2 0	179 8 0			
Sale of grass	...	...	826 8 0	139 12 3	...		
„ singharas	...	...	109 1 0	...	...
„ wood	...	...	355 0 3	405 5 0	...		
„ patrus	...	...	326 1 0	407 4 0	...		
Lense Toda Bhim Canal	...	...	171 0 0	...	...
Last year's revenue received in Tehsil Jamwa Ramgarh,	...	...	81 2 0	...	...
Total						2,804 14 3	1,131 13 9
			1,809 12 3	952 5 3			
GRAND TOTAL						55,118 5 3	19,072 11 3

6. Adding share of produce to the revenue collected the total Returns for Northern and Eastern Districts stand at Rs.2,02,325-2-9 and Southern and Western Districts Rs.72,727-0-3, and the cost of supervision and guarding amounts to Rs.10,071 for Northern and Eastern Districts and Rs.12,320 for Southern and Western districts, which give a percentage of Rs.4-15-7 and Rs.16-15-0 respectively.

7. In comparing the revenue realised during the year under review with that of the previous year in the Northern and Eastern Districts, there appears an increase of Rs.4,083-2-6,* whereas in the Southern and Western Districts there has been a decrease of Rs.889-7-6† owing to deficient rainfall.

8. The following table shows land irrigated in each Nizamat :—

Name of Nizamat.	AREAS IRRIGATED.			
	Khalasa.	Jagir and oodick.	Beds of tanks.	Total.
	Big. bis.	Big. bis.	Big. bis.	Big. bis.
<i>Northern and Eastern.</i>				
Dausa	6,838 16	4,760 10	1,065 10	12,663 2
Hindown	5,348 16	163 10	2,059 0	7,576 6
Sawai-Madhopur	3,261 18	214 14	278 5	3,757 17
Torawati	1,188 14	3,798 19	...	4,987 13
Gungapur	15,003 15	1,084 7	1,097 15	18,386 0
Sawai-Jaipur	2,028 16	3,137 7	20 0	6,026 3
Total	35,173 15	13,764 7	1,521 19	53,160 1
<i>Southern and Western.</i>				
Mulpura	9,419 8	1,755 8	1,019 11	12,334 7
Sambar	7,391 16	2,812 13	2,180 0	12,381 9
Sawai-Jaipur	2,916 3	929 19	10 0	3,877 2
Total	19,757 7	5,480 0	3,239 11	28,185 18
GRAND TOTAL	54,931 2	19,253 7	7,761 10	81,945 19

* 1901-02 Rs. 1,98,212-0-3

† Rs. 73,616-7-9.

1902-03 Rs. 2,02,325-2-0

Rs. 72,727-0-3.

Increase ... 4,083-2-6

Decrease ... 889-7-6

APPENDIX G.

*List of Final Bills submitted to Raj from 1st September 1902 to 31st August 1903
or Sambat 1959.*

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
1	Bala Sagar at Sankarwara village, Tehsil Toda Rai Singh ..	5,063	0	0
2	Sinking curb in 5 wells on waste land south of Madho Sagar, Ghata Garowli ..	785	0	0
3	Superintending Engineer's Bungalow, repairing mud walls of stable, ..	64	0	0
4	Making a curtain wall at Hawalat, Gangapore ..	257	0	0
5	Bund Bishun Samand -Silt clearance of channels and supply cut ..	1,087	1	1
6	Making 25 feet long masonry wall and putting dry rubble stone near Natani-ka-Bagh ..	66	9	8
7	Tank Kote—Silt clearance of supply cut ..	117	13	3
8	Sinking wooden cylinder in well No. 9, in the Ram News Garden ..	98	2	9
9	Sinking well at Jacobabad village below Tori Sagar near Toda Rai Singh ..	323	3	0
10	Corewall on both sides of Irrigation sluices on Tanks in the Eastern District ..	1,259	5	3
11	Works on Bund Gharara ..	113	15	4
12	Making arrangement for supplying well water to animals' cages in Ram News Garden ..	155	8	5
13	Making a katcha house for Raj bullockmen at the Superintending Engineer's Bungalow near well No. 1 ..	175	5	6
14	Sinking wooden <i>bachri</i> in well behind Nohra of Municipal Committee near the Maharaja's College, Jaipur ..	150	9	1
15	Clearing well at Natani-ka-Bagh as per request of Kajore ..	10	7	7
16	Repairs to Madar Darwaza at Runthambore Fort ..	164	4	0
17	Constructing a Barrack at New Jail, Jaipur ..	7,787	0	9
18	Petty works at old Jail, Jaipur ..	73	14	3
19	Do. at New Jail, do. ..	49	2	0
20	Watering trees of garden at the Superintending Engineer's Bungalow 1893-1901 ..	7,049	11	3
21	Deepening well 15 feet at Rai Singhpora, Tehsil Toda Rai Singh ..	128	15	0
22	Making a small bridge over Matholao Duct at Niwai ..	43	2	0
23	Projecting the piers of the crossing sluice and putting in grooved stone to use planks, Chaparwara Sagar, L. L. North Canal ..	28	2	6
24	Silt clearance of Madhorajpura Tank Ducts ..	110	3	0
25	Increasing supply of water in Naglao Tank at Bonli by putting a stoppage in nullah east side by throwing a bund across the nullah and making a supply cut ..	137	10	6
26	Dhudda ka Rasta - Making a Katla saucer drain on both sides of the road ..	132	8	3
27	Clearing Dhora from Akheypura branch to Manpura ..	129	5	0
28	Deepening well at Rai Singhpora at Toda Rai Singh as per request of the Zamindars ..	90	9	0
29	Completing dry stone pitching at Ganda Nullah for Mohna malce's field ..	209	10	2
30	Setting iron sluice in Kala Talao at Jacobpura in place of plugs ..	140	11	0
31	Making a dry stone pitching on both sides of sluice of Bohraka Dhand Tank, Tehsil Mozabad ..	106	15	0
32	Deepening well at Partabpura ..	238	7	3
33	Repairing and clearing canal of Ram Sagar at Phagi ..	192	13	9
34	Repairs to Raj House at Mount Abu ..	548	4	5
35	Petty works at New Jail, Jaipur ..	195	11	0
36	City Conservancy Tramway, maintenance of ..	55,166	5	7
37	Road from Basai to Agra Road ..	457	13	3
38	Works at Plague Observation Camp ..	53	4	4
39	Renewing grass chappar of sweepers' quarter and meeting shed, etc., at the City Conservancy station ..	252	10	0
40	Sinking masonry cylinder in well Pachpiran Chowkrey Poorani Basti ..	110	0	0
41	Sinking wooden <i>bachri</i> in well of Gwalia, Chowkrey Top Khana Hazoori ..	72	13	0

APPENDIX G—continued.

No. of Final Bill.	Name of Work.	Amount		
		Rs.	a.	p.
42	Repairing corrugated sheet urinals, Khunda Kotwali, and Maliyan, etc., Chouper Amer ..	38	2	9
43	Sinking wooden <i>bachri</i> in well near Railway Crossing, Ajmer Road ..	32	14	6
44	Cost of Bengal Cotton seed ..	111	13	9
45	Repairing marble pillars supporting chains in front of Ajmer Gate and inside Ram Newas Garden in front of Gas Works ..	134	11	2
40	Superintending Engineer's Bungalow—Petty works Washerman's house ..	45	10	5
47	City water supply maintenance of 1899-00 ..	30,841	11	0
48	1900-01 ..	63,432	11	4
49	Constructing Thana buildings at Amer, Chandwaji, Sooroth and Vazirpore ..	9,113	0	0
50	Deepening irrigation well at Furhadpura near Chaparwara Sagur Canal ..	419	0	0
51	Making a bridge near Sanganeer canal at the request of Zamindars of Chandlai ..	1,396	0	0
52	Repairing Bhairon Sagur at Thalli ..	2,112	0	0
53	New Tank at Kala Nada near Panwar ..	5,043	0	0
54	Deepening well at Harbhagatpura ..	150	0	0
55	Petty works at old Jail, Jaipur ..	2,342	1	7
56	Making three semi-circular wells for outlet sluice at Raja Mull-ka Talao ..	270	0	0
57	Repairing Jail Building at Nim-ka-Thana ..	253	0	0
58	Manure for Agra Kothi Garden ..	8	0	0
59	Making kutcha road and bridge, Rasta Mehroon at Tori Sagur ..	3,948	0	0
60	Tori Sagur—Making a bridge at Mehroon below bund ..	883	0	0
61	Abpashi Establishment, 1897-1898 ..	18,354	10	9
62	1898-1899 ..	17,836	8	9
63	Tank Mandi, Tehsil Phagi ..	3,039	15	10
64	Petty repairs to earthworks and putting stone on the inner slope of Chaparwara tank and road below the bund opposite Chain No. 99 ..	413	13	3
65	Sinking well No. 2 at the Superintending Engineer's bungalow garden ..	591	2	7
66	Deepening well at Motipura, Tehsil Toda Rai Singh ..	142	8	0
67	Repairing Native Doctor's, Compounder's and Dresser's houses at New jail, Jaipur ..	496	13	0
68	Making <i>Jawara tatters</i> , etc., for Aviary in the Ram Newas Garden ..	176	12	7
69	Adding and sinking 8 feet <i>bachri</i> in well near Hathroi Kothi Road, Baroda Village ..	77	12	3
70	Sinking wooden <i>bachri</i> in well near the Residency Bazar ..	56	8	11
71	Raising wooden <i>bachri</i> in Mahawatan well, Chowkrey Top Khana Hazoori ..	73	12	2
72	Sinking well at Cotton Press, Mandaor ..	631	5	3
73	Ram Newas Garden—Sinking wooden <i>bachri</i> in well No. 7 ..	53	7	6
74	Repairing <i>tat pardas</i> and <i>sirki tatters</i> , etc., Aviary, Ram Newas Garden, ..	163	14	0
75	Thana buildings in Shaikhawati ..	12,909	10	7
76	Keep of horses for the Executive Engineer, Jaipur ..	967	0	9
77	Watering trees at the Executive Engineer's Bungalow Garden ..	579	11	6
78	Engraving names of graduates in the Maharaja's College, Jaipur ..	33	7	6
79	Removing and resetting tap at Deorhi Sarad ..	7	6	1
80	Moran Sagur—Making a culvert on 4th branch near Jhara village ..	260	4	11
81	Making outlet for smoke to Sepoys' cookrooms and slab-roof over porch of gate at Jail, Malpura ..	143	7	8
82	Making <i>katta</i> floor under <i>saiban</i> at customs houses, Dhankia, Jatarwara and Jagatpura ..	230	4	8
83	Rubble stone strainer bund at Nullah Amani-hah ..	14,504	0	2
84	Constructing a new godown at Chowkey Mahwa ..	434	5	11
85	Altering sand in the City Tigers' Cages ..	174	5	10
86	Kaligh Sagur Canal—A culvert near the pucca jheel in Gangati limits ..	454	11	4
87	Repairs to Thana at Mahwa ..	22	1	8
88	Making chowki at Kanoota, Agra Road ..	874	2	5
89	Repairs to and thatching chappars of Poor House, Jaipur ..	540	12	10
90	Sinking wooden <i>bachri</i> in Nawab Vilayat Ali Khanji's well, Chowkrey Topkhana Hazoori ..	92	12	6
91	Sinking wooden <i>bachri</i> in well of Deva Mina at the Residency Bazar ..	97	13	9
92	Do. do. of Deoli Escort Lines at the Residency, Jaipur ..	47	1	9

APPENDIX G—continued.

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
93	New bund, Uttarna Thikana Dooni	43	13	6
94	Clearing well at Badanpura whereon the clothings of the Mayo Hospital patients are washed	4	3	6
95	New bund, Sawantgarh, Tehsil Toda Rai Singh	11,943	0	0
96	Preparing four well ducts over Kaligh Sagur Canal to carry well water across the canal	713	0	0
97	Tank Dawarakpura or Keria	6,586	0	0
98	Surveying and drawing of Rao Rajaji Uniara's Garden	3	14	0
99	Exchange Compensation Allowance to Mr. C. E. Stotherd	537	8	0
100	Petty works at the Cotton Press, Mandaor	3,212	5	0
101	Sinking wooden and masonry cylinders in wells Nos. 4, 5 and 11 in Ram Newas Garden	1,064	8	11
102	Sinking wooden <i>bachri</i> in big well, Jagsala, Chowkrey Poorani Basti	95	7	6
103	Repairing frescos on the walls of the Jaipur Museum	552	2	3
104	Clearing big well and sinking wooden <i>bachri</i> in Baghichi well at the Residency, Jaipur	282	13	8
105	City Conservancy Tramway	10,396	19	4
106	Repairs to fire pumps of the Municipal Committee, Jaipur	20	10	9
107	Certain necessary works in Ram Newas Garden	1,247	8	3
108	Repairs to wooden bridge at Raja Mull ka Talao near temple Girdhariji	11	13	0
109	Repairing kunkur floor of urinals at Khunda Manuck Chouk and Prohitji	10	3	3
110	Watering trees of garden at the Superintending Engineer's bungalow 1901-02	1,071	5	6
111	Repairing pipe and wall at the City Tigers' Cages	0	14	9
112	Preparing wooden <i>bars</i> for boat for catching fish at Bund Sodala	3	0	9
113	Making a bath-room at Colonel Sir Swinton Jacob's bungalow	201	14	5
114	Petty works at the Jaipur dak bungalow	177	10	2
115	Repairs to kutchra pal and increasing pucca corewall of Tank Rupa-halli	2,131	0	0
116	Whitewashing and repairing the plaster of Dispensary Building at Sambhar	205	15	0
117	Lengthening Supply Cut of Hurla Tank	513	5	4
118	Repairing gap in inner slope of Bund Dhelra	232	5	7
119	Renewing, etc., chappor of Poor House at Mayo Hospital	161	2	10
120	Preparing a new boat for Rawalji ka bund	101	11	1
121	Removing sandy hill near Tori village, which in high rains fills up the canal near the half mile	692	15	6
122	Clearing and putting wooden <i>bachries</i> in wells in the city of Jaipur	4,371	6	7
123	Cotton Press, Mandaor—Capital Account	2,442	0	0
124	Katli Inundation Cut Works	26,416	15	6
125	Reception of H. E. the Viceroy of India Lord Curzon	6,576	0	0
126	Making kutchra road in Sanganeer for reception of H. E. the Viceroy of India Lord Curzon	187	0	0
127	Chandpole Jail, putting glasses to Office and Hospital doors	21	3	9
128	Repairs to Pal Bund, Panwar	3,146	0	0
129	Preparing pucca corewall in kutchra pal of Bund Sawantgarh	6,024	0	0
130	Repairing and clearing L. L. South Canal of Chaparwara Sagur	1,014	0	0
131	Chandlai Supply Cut from the Railway Bridge at Sanganeer	13,458	11	4
132	Repairs to Agra kothi	20	6	3
133	Lowering 2 ft. and widening 10 ft. supply cut Harnarali Channel	22	10	3
134	New Tank at Manpura village, Tehsil Mozabad	4,100	10	0
135	Providing jhirri stone and wooden planks to the door of waste weir of Ghata No. 1, of Moran Sagur	143	10	8
136	Tank Pachala	2,932	1	8
137	Repairing and clearing H. L. South Canal of Chaparwara Sagur	533	0	11
138	Clearing canal of Bandolao Tank at Naraina	415	14	6
139	Repairing sluice in waste weir of Bund Naimla	22	12	4
140	Constructing a <i>khoora</i> for waste weir, Ghata No. 2 of Moran Sagur	102	14	0
141	Moving sluice bund, Futtah Sagur	500	12	3
142	Repairs to Johriwala Tank at Sarowli near Vazirpore	2,159	6	4
143	Making 4 bridges on Sinoli Supply Cut for convenience of travellers and zamindars	1,499	6	5
144	Making sluice in Doongarwara Canal of Ghata No. 2 of Moran Sagur	122	11	5
145	Bhishtees, bullocks, etc., for supplying water from wells in Ram Newas Garden	412	5	4

APPENDIX G—continued.

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
146	Johriwala Supply Cut Bridge in mile 10 of Gangapore and Vazirpore road	1,194	10	2
147	Taijawala tank at Bamanwas—Making a pucca sluice from Leewali Canal for filling in water	81	1	3
148	Digging a new canal from Leewali to Taijawala Tank	183	7	2
149	Bund Jamwa, Ramgarh, repairs and maintenance	943	0	0
150	Making two bridges over irrigation canals of Kharila and Naglao tanks at Banli	205	6	0
151	Repairs to Thana at Sooroth	11	10	0
152	Bund Khurr—Making two falls on main canal	584	12	4
153	Akheypura Branch—Preparing pucca side sluice	85	15	6
154	Sinking wooden curb in well in mile 12, Ajmere Road	31	5	0
155	Sindholi tank—Two bridges on Kalota and Khora canals on Jaipur and Baswa way	207	3	1
156	Raniyawala Tank—Cart-bridge over irrigation canal on Ulwar and Gangajeeke rasta	92	0	3
157	Repairs to Koond Moran (preventing percolation)	435	0	9
158	Raniyawala Bund—Head sluices in Supply Cut	94	3	0
159	Making 3 irrigation sluices in irrigation canal of Khora village of Sindholi tank	319	13	1
160	Pucca Link Road from Amagarh quarries up to Ghat Road	394	15	9
161	Chaparwara Sagur Canal—Clearing Dhoras	1,597	1	0
162	Racquet Court at the Residency, Jaipur	2,796	13	6
163	Repairing surveying instruments of Rewari and Phalera Railway	53	15	6
164	Repairing rails and wagons at the garden house of Rao Bahadur Babu Kanti Chunder Mookerji	3,295	1	0
165	Repairs to quarters occupied by the Residency Office Establishment	595	4	10
166	Cenotaph of H. H. the late Maharajah Ram Singhji	2,371	4	8
167	Widening Ganwar Supply Cut 15 ft. from the river Mahasli	15,000	0	0
168	Tank Gobindi	1,501	0	0
169	Repairing chowkhat of door and iron bars of doors, etc., at Hawalat Vazirpore	14	0	0
170	Cost of wooden <i>lathas pachrang</i> placed on <i>dasehra</i> at Chandni Chouk, Rooi-ki-Mandi and Pahargunj	24	1	6
171	Fixing new wooden door frame and doors to corn godown at old Jail, eaten by white ants	22	15	0
172	Western District Tanks Establishment	4,152	2	6
173	Moharrirs for guarding Western District Tanks, 1898-99	1,935	1	6
174	Do. do. do. 1899-00	1,864	0	0
175	Do. do. do. 1900-01	1,113	0	9
176	Do. do. do. 1901-02	1,170	0	0
177	Abpashi Establishment 1899-00	18,718	3	5
178	Do. do. 1900-01	18,365	8	5
179	Do. do. 1901-02	20,150	10	0
180	New Bund Uttar Sagar at Binori	1,038	0	4
181	Jail Building at Gangapore	4,765	0	0
182	Female Jail to the west side of old Jail, Jaipur	58,241	5	9
183	Fixing a Lift Force Pump in the well and connecting with the pipe to the present Tank on the roof of Operation Room at Mayo Hospital	957	10	7
184	Compensation of houses submerged in Kaligh Sagar	2,015	8	0
185	Jail Building at Hindown	21,474	2	0
186	Galvanised Iron Pipe for Flagstaff, Kothi Agra	37	3	3
187	Renewing glass panes, etc., on reception of H. E. the Viceroy of India at old Jail Hospital as per request of the Superintendent, Jails	46	12	5
188	Repairs to Dehla Tank at Malarna Chaur	1,658	9	7
189	Do. and thatching chapper of Moharrir's quarter at Dehmi Bungalow	145	2	0
190	Repairing stable and out-houses, etc., at the Superintending Engineer's Bungalow	733	5	5
191	Travelling, etc, expenses of officers in the Eastern District	3,000	0	0
192	Refund of cost of trees, Canal Bund Neota, to Jagirdar of Mohana	236	0	0
193	Making a sluice on Baili Channel at Futeh Sagar	35	0	0
194	Gratuity	239	6	1
195	Refund of cost of trees of Sooltan Nath Jogi, Mozabad	17	0	0
196	Making Chabootras for placing rain gauges at Tehsil Vazirpore, Toda Bheem and Ratan zillah	8	15	9

APPENDIX G—continued.

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
197	Clearing silt and repairing Canals, Bund Neota and Palri ..	2,509	11	9
198	Chandlai Channel Silt clearance	577	6	11
199	Raisur or khurr main canal silt clearance	1,566	15	11
200	Rayawala main canal silt clearance	343	1	2
201	Constructing a Bund, Bundh Jugrampura, Tehsil Mahwa ..	5,366	11	5
202	Raising 2 feet Pal, Bund Rabaota	4,039	7	8
203	Guard's quarter at the Government Telegraph Office, Jaipur ..	34	0	0
204	City water supply maintenance	37,041	2	8
205	Amanishah now supply cut silt clearance	10	5	3
206	Sainthal Sub-Division Establishment	318	0	0
207	Dry stone bridge or Kharanja on Saipura way in sluice No. 1 of Bund Jai Sagar at Poond	16	13	0
208	Sinking wooden <i>bachri</i> in <i>Koliyan</i> well, Chowkrey Top Khana Hazoori, Lanka Ghata Road	73	8	6
209	Boochara Sub-Division Establishment	543	8	0
210	Do Bund repairs and maintenance	7,162	0	6
211	Repairs to Chowki at Mahwa	7,839	2	9
212	Maintenance of Kothoon and Lalote Road	96	12	0
213	Reception of H. R. II. the Duke of Connaught	150	4	6
214	Ghat Bhundari Tank Establishment	1,591	6	5
215	Delhi Coronation Darbar Works	1,790	0	0
216	Works at Hathroi Kothi	7,890	3	8
217	Altering water tap in Chauk Rawala Sirkar Maji Sahiba Sri Dhira-awalji	254	3	5
218	Bund Thana—Raising 2 feet H. W. J.	17	14	2
219	Repairing and raising pal of old Bund Bainra, Tehsil Toda Rai Singh	3,433	0	0
220	Tank Rampura, Tehsil Toda Rai Singh, made up of two Nadas between Jhunpri Tank and Bharni Nadi	2,574	0	0
221	Lengthening 100 feet masonry wall of waste weir of Ram Sagar Malarna Chaur	2,500	0	0
222	Repairing and enlarging old Gaonwai Tank at Bagait	422	0	0
223	Repairs to Gaonwai Tank at Kohara village	1,000	0	0
224	Two Tanks at Chakwara—Bodia and Dholai	5,101	0	0
225	Mahashi River Making a pucca weir for the South canal of Chaparwara Sagar near Khairi	3,222	0	0
226	Raising 2 feet waste weir of Moran Sagar	8,033	0	0
227	Surveying and drawing of Nim-ka-Thana Fort	823	0	0
228	Repairs to Akhari Minars	31	12	7
229	Making Bund Muhi at Gondha Katla	6,522	7	11
230	Repairs to Deoli and Raj Mahal Road	12,356	3	2
231	Bund Pandrara, Tehsil Toda Rai Singh—pucca core-wall in katcha pal or embankment and 3 pucca culverts over Irrigation Channel ..	1,444	5	6
232	Link Road from Jhir Station to Agra Road	4,258	0	6
233	Pucca corewall in Ghoorla Tank at Laewali	1,191	11	0
234	Works at Hathroi Kothi	610	10	8
235	Goojar Thikana Tank, Tehsil Lalote, repairs to inner slope ..	170	0	0
236	Removing earth at Ghat Road	199	12	8
237	Pucca road on cartway towards east to connect Jhir station road ..	200	1	4
238	Pucca sluice for Nazimwala Tank at Bamanwas	778	13	10
239	Kaligh Sagar Canal, making a kunkur <i>khoorah</i> in mile 9	286	6	0
240	Constructing a bridge on Sindholi supply cut on way to Dharampura, ..	117	2	6
241	Repairing and clearing Jhirana Canal	355	8	8
242	Making a syphon for carrying water from Gaonwai Tank to H. L. South Canal, Tori Sagar	59	0	3
243	Constructing four <i>barjees</i> of boundary at Jail near the Church at Ghat Gato	131	0	3
244	Chaparwara Sagar L. L. South Canal—Digging irrigation duct from Farhadpura Branch to Sri Rampura	16	11	10
245	Gratuity	291	13	3
246	Expenses of the Jaipur Cricket Team to Mount Abu and back ..	676	1	1
247	Constructing a privy for public use near the Dispensary building at Sambhar	481	8	10
248	Banganga Main Canal—Silt clearance of	407	15	5
249	Sindholi Tank—Pucca <i>khoorah</i> of Irrigation Channel near Dantli ..	1,234	8	11
250	Repairs to Road from Sheodaspura to Chandlai	65	15	8
251	.. ..	184	2	0

APPENDIX G—continued.

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
252	Tori Sagar parapet coping on corewall—Pointing stone joints and re-setting coping	99	5	6
253	Repairs to District Dispensaries	1,679	9	6
254	Do. Ram Sagar old Tank at Choru	364	7	3
255	White-washing and repairs to Bungalow at Kaligh	73	6	6
256	Repairing and clearing Canal of Bala Sagar at Suttana	45	0	3
257	Do. Deswali well at Mozabad	233	7	9
258	Repairs to Kund and Gao Ghat at Lamba Hari Singh	75	0	9
259	Constructing a privy for public use near the Dispensary building at Sambhar	407	14	10
260	Constructing five <i>khooras</i> over Nasrida Tank Canal	160	7	3
261	Repairs to Post Office at Hindown	143	9	6
262	Rent of a shop in the use of P. W. D. for keeping flags, etc.	23	5	0
263	Wells in the South-western District, Kaligh	3,561	15	6
264	Kaligh Sagar Canal Branch to Akheypura, Irrigation sluice and cross- ing sluice	168	0	0
265	Heelolao Tank at Toda Rai Singh	1,331	0	0
266	Preparing bridge over Neota supply cut near Dhani Kumharan	755	0	0
267	Neota and Palri Bund—Clearing silt and repairing canals	500	0	0
268	Neota supply-cut—Silt clearance	1,177	0	0
269	Clearing south high level and the north high level Neota Canal	753	0	0
270	Travelling, etc., expenses of officers in the Eastern District	600	0	0
271	Cost of one wooden <i>latha Pachrang</i> Rahdari Rampole	8	0	6
272	Gratuity or <i>parwarish</i> for <i>Nookta</i> of B. Mooni Lal, late Zillahdar, Western District	100	0	0
273	Gratuity or <i>parwarish</i> to B. Jadu Nath, Manager, Cotton Press, Jaipur, for marriage of his son	100	0	0
274	Chappers for Plague Observation Camp at Bohra-ka-Bagh for inspec- tion of travellers from Nimahera Elaka Tonk	32	1	9
275	Compensation of wells at Madho Sagar Ghata Garowli	6,862	0	0
276	New Bund Lamba Hari Singh, increasing corewall and raising 1 foot II. W. L.	8,047	0	0
277	Bund Bagri or Nonaria—Repairing and increasing Pal and adding a sluice	3,836	0	0
278	Repairs to Tonk Deoli fair weather road	3,393	5	5
279	Islampore Tank, raising 2 feet II. W. L.	8,445	5	4
280	Jai Sagar at Toond—Pucca corewall in the gap and repairs to inner slope	4,236	4	11
281	Bund Ram Sagar at Choru, repairing Pal and pucca sluice	345	9	3
282	Raising Binori and Deccan Sagar	3,927	0	0
283	Chaparwara Sagar, increasing L. L. South Canal and preparing pucca fall and excavating 3 new <i>dhoras</i>	451	6	3
284	Silt clearance of duct from Akheypura Canal	515	6	1
285	Repairs to Bund Sainthal Sagar	192	15	9
286	Repairs to chappers, etc., at the Officiating Superintending Engineer's Bungalow compound	86	11	9
287	Clearing Jhallana Tank or Kund	98	6	3
288	Repairing drain near Sargasooli as per request of Johri Lal, Jamna Lal, etc., Dalwalan	95	9	4
289	Repairs to buildings at Khundar Fort	27	6	6
290	Urinal for new Jail, Jaipur	6	3	9
291	Sewai Madhopur Sub-Division Establishment	7,488	3	3
292	Expenses incurred on food, etc., of cricket team to Mount Abu	331	9	3
293	Supplying 11 Bhankri Slabs for stall of horses at the Residency, Jaipur	39	15	6
294	Dispute boundary between Jaipur and Alwar by B. Har Dayal Singh, (Survey Expenses)	215	13	10
295	Ice Revenue Account	22,161	13	9
296	Cricket Play in Ram Newas Garden, donations	2,308	4	2
297	Pension Account	12,546	2	6
298	Bund Bharoti, making katcha corewall and increasing Pal	274	5	0
299	Dhund Talao Nagar, making 2 pucca sluices to supply Noorkhan's Nari	63	0	8
300	Nasrida Tank, widening and increasing channels	291	8	3
301	Constructing quarters at the Overseer's Office, Mahwa Sub-Division	1,021	9	7
302	Banaria Tank—Excavating <i>dhora</i> from the canal for irrigating land of Rai Singhpura	114	0	3

APPENDIX G—concluded.

No. of Final Bill.	Name of Work.	Amount.		
		Rs.	a.	p.
303	Completing dry stone pitching for Paras Ram and Chotoo Mali's field near Gandhi Mori	105	15	7
304	Assistant Engineer's Office Establishment	28,880	6	6
305	Gangapore Sub-Division do.	10,402	1	9
306	Leewali Tank do.	3,940	6	11
307	Moran Sagar Tank do.	7,524	12	8
308	Office Establishment, Supervisor and Overseer, Jaipur	21,863	12	10
309	Sawantgarh Tank necessary works	322	10	0
310	Kaligh Sagar Canal—Clearing Mozabad Branch	554	1	3
311	Akheypura, Sawarda and Paloo Khurd—Eight number pucca sluices,	750	0	6
312	Bund Barika Thore at Bairath	25,454	8	10
313	Kaligh Sagar Canal—Repairing Patri of Akheypura Branch	5,703	15	9
314	Works at Mayo Hospital, Jaipur	3,560	15	10
315	Bund Bussi, Pargana Niwai	8,356	8	3
316	Repairs to Thana building at Hindown	98	12	3
317	New Bund Chan, raising 1 foot H. W. L.	4,109	4	2
	TOTAL	9,62,904	15	6

APPENDIX H.

Total monthly and annual rainfall for the year 1903.

Station.	October 1902	November 1902	December 1902	January 1903	February 1903	March 1903	April 1903	May 1903	June 1903	July 1903	August 1903	September 1903	Total.	Average total annual rainfall.
Hindaun	0.56	...	0.08	0.15	...	...	...	0.28	0.96	2.61	11.90	4.47	21.04	26.23
Mohwa	1.25	...	...	...	...	...	...	0.52	0.74	2.30	8.85	2.83	16.29	20.08
Gungapore	0.60	...	...	...	...	...	...	1.18	0.60	5.04	18.44	2.46	28.32	27.11
Bundi	0.72	...	...	...	...	...	...	0.14	0.61	7.85	10.63	3.03	22.48	22.17
Sawai-Madhopur	1.55	...	...	...	...	...	...	0.85	0.94	4.71	10.96	7.16	22.20	31.28
Dausa	0.18	...	...	...	...	...	...	0.21	0.91	6.21	9.49	5.46	22.48	23.84
Lalsote	0.83	...	...	...	...	...	...	0.28	0.23	9.32	8.86	5.25	24.77	25.17
Chatsau	0.28	...	...	...	...	...	...	0.15	0.36	6.31	10.65	4.60	22.34	25.78
Unjara	0.25	...	...	...	...	0.02	...	0.04	0.85	5.93	7.91	9.95	21.92	27.12
Jalpur	0.06	...	...	0.15	...	0.03	...	0.49	0.20	5.62	11.79	4.71	23.05	24.46
Sanganur	0.08	...	...	0.06	...	...	...	0.37	0.33	6.19	8.19	1.42	19.45	21.88
Malpura	...	...	...	...	...	...	...	0.17	0.28	3.71	5.16	5.63	14.81	19.69
Jhunjhuna	0.70	...	...	0.30	...	0.02	0.01	0.52	1.60	5.08	7.71	0.92	16.38	17.53
Sri Madhopur	1.00	...	...	0.20	...	0.70	...	0.12	0.92	9.86	8.60	3.30	25.01	22.91
Sambhar	0.16	...	...	0.21	...	0.08	...	1.01	0.92	10.00	5.07	6.35	24.03	20.81
Sikar	0.83	...	...	0.66	...	0.35	...	1.75	1.03	11.27	6.61	3.23	24.13	18.16
Khatri	1.31	...	...	0.69	...	0.18	0.08	1.66	0.57	9.68	12.90	5.63	30.90	22.59
Chirawa	0.57	...	...	0.27	...	...	...	0.19	0.58	1.64	5.13	3.69	15.37	15.44
Kotputli	1.10	...	...	0.41	...	0.09	...	0.37	1.13	6.90	7.90	3.61	21.60	14.28
Chomu	0.07	...	...	...	...	0.07	...	0.81	0.17	9.01	8.92	9.55	28.63	22.18
Nim-ka-Thana	1.17	...	...	0.05	...	0.26	...	0.99	0.34	6.61	7.91	3.26	20.05	22.01
Sunodh	...	...	...	0.05	...	0.10	...	0.67	1.10	5.99	10.54	6.43	21.88	17.65
Total	13.35	...	0.08	2.00	...	1.90	0.12	11.90	14.67	114.68	201.45	105.24	408.30	494.80
Average for each month for the State	0.60	...	...	0.09	...	.08	...	0.51	0.66	6.57	9.25	4.78	21.65	23.49

ANNUAL REPORT
OF
LALA RUP CHAND
Assistant Engineer
JAIPUR STATE
FOR THE
YEAR ENDING 31ST AUGUST 1903.

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ANNUAL REPORT of Lala Rup Chand, Assistant Engineer, P. W. D., Jaipur, for the year ending 31st August 1903.

1. **Statement of Expenditure.**—The expenditure during the year ending 31st August on works and establishment in the Eastern District in charge of the Assistant Engineer has been Rs.1,18,792-6-2 :—

			Rs.	a.	p.
Through Assistant Engineer	...	...	50,993	7	11
„ Overseer, Dosa	...	...	40,015	13	11
„ Overseer, Mahwa	...	...	27,783	0	4
Total			1,18,792	6	2

The statement below shows the detail of receipts and expenditure transacted in the Assistant Engineer's office books :—

Credit.	Amount.	Debit.	Amount.
	Rs. a. p.		Rs. a. p.
To last year's balance	10,514 3 6	By loss of Tools account	1 8 0
„ Unclaimed wages	12 8 6	„ Security Deposit	106 0 0
„ Superintending Engineer's account,	35,702 0 11	„ Miscellaneous advances account...	50 0 0
„ Profit and Loss account	50 3 6	„ Assistant Engineer's office establishment.	1,194 0 0
„ Grass account	5 0 0	„ Eastern District establishment	360 0 0
		„ Repairs, building	85 4 9
		„ Road	48 8 3
		„ Original works, Irrigation	34,212 1 11
		„ „ Repairs	3,140 9 6
		„ Surveys	217 4 0
		Total	39,415 4 5
		By balance on 31st August 1903	6,869 12 0
GRAND TOTAL	46,284 0 5	GRAND TOTAL	46,284 0 5

2. **Rainfall.**—There was an exceptionally heavy downpour, varying from 6 to 10½ inches in 24 hours, on the 8th August, along the Lalsote Moran Sagar range of hills, by which Maroli, Dakhan Sagar, Moti Sagar, Gandal, Banyawala, Nayatalao and nearly all the zamindari tanks in Bamnawas and Gangapur tahsils were breached. Moran Sagar filled and overflowed in about six hours, the run off being nearly 8 inches.

The following statement shows the rainfall and run off of some of the principal tanks in the Eastern District :—

Name of tank.	Drainage area.	Rainfall.	Ratio of run off to rainfall.	Total run off.	REMARKS.
	Sq. miles.		Per cent.	Inches.	
Boochara	80	17.50	24.30	4.25	Rainfall in ordinary showers.
Ramgarh	297	11.26	10.10	1.10	Do. do. do.
Sainthal	118	16.84	11.10	1.87	Do. do. do.
Binori	40	18.60	16.96	3.17	Rainfall in heavy showers 6.16 inches in 24 hours on 8th August 1903.
Moran Sagar	35	18.60	42.50	7.95	Rainfall in heavy showers, 10.50 inches in 24 hours on 8th August 1903.
Maroli	15	16.84	37.40	6.31	Rainfall in heavy showers, 7.08 inches in 24 hours on 8th August 1903.

3. **Estimates**—168 estimates have been prepared and submitted.

4. **Journal**.—The Assistant Engineer's Journal shows that the distances travelled in inspecting and checking the works in the districts are as under :—

						Miles.
By road	...	...	...	...	...	1,454
„ rail	...	...	...	...	...	758
Total						2,212

5. **Work in the Head Office**.—Worked in the Head Office for a total of 151 days.

6. **Imarat Final Bills**.—Disposed of 21 Imarat final bills after going through such items as admitted of check.

7. **Office Work**.—In the English office, besides the usual routine work, the following is a brief summary of the work done :—

					No.
Letters received and despatched	...	...	...	...	741
Muster rolls checked	...	...	...	...	916
Day-books prepared	...	...	...	...	342
Contractors' and other bills prepared	...	...	...	...	170
Final bills prepared	...	...	...	...	48
					2,217

In the Persian office 5,878 papers were received and despatched.

8. **Overseers and Sub-Overseers**.—Babu Kotu Mall has been in charge of Dosa Sub-Division. He is a passed overseer of Roorkee College, and being properly qualified is of much help to the Assistant Engineer. He can correspond in English. The estimates and papers submitted by him do not give any trouble. The distances travelled by the overseer in inspecting and supervising works are :—

						Miles.
By road	...	...	...	...	...	2,354
„ rail	...	...	...	...	...	298
Total						2 652

Babu Mohamad Hoosen has been in charge of Mahwa Sub-Division. He works hard, but on account of his want of English knowledge has mostly to depend on his clerk for estimates and accounts; hence all the important estimates have to be framed over again by the Assistant Engineer and his accounts are also not disposed of promptly.

The distances travelled by the overseer in inspecting and supervising works are 3,204 by road and rail.

Babu Nathu Lal, sub-overseer, on being relieved of Ramgarh Sub-Division, was put in charge of Maroli and Garoli works. He has done his work satisfactorily. He has now been promoted to the grade of overseer, which he well deserves.

Babu Dina Nath, in charge of Ramgarh canal, has been doing all the surveys as well as earth and masonry works connected with the canal and rajbahs.

Babu Ganga Pershad, sub-overseer, has been employed in surveying and preparing estimates and has remained well occupied. He has done the survey of Sainthal north and south canals, Mahesra bund, levels of pall of Gaitolao, contours of Bairat and Maheswa bunds, prepared detailed plan of Nimka Thana Fort, and took plans and notes of bunds in the Kishengarh territory on the tributaries of Mahashi river.

9. **Testimony to Office Establishment**.—Lala Sheo Nath, in charge of the English Office, has carried out his duties to my entire satisfaction. The Raj has just granted him promotion, for which he was recommended more than once and which he well deserved.

Pandit Moti Lal, Assistant Clerk, has worked satisfactorily. Munshi Bhawani Charan, in charge of the Persian Office, has performed his duties satisfactorily.

Sub-treasurer Lala Ram Pertab has been making payments on all works under Assistant Engineer's direct charge, and has done his work well.

II.—BUILDINGS.

10. **Hindaun Choki.**—A choki for the road munshi, consisting of a tibara 15'×9' and two side rooms 9'×9' each, has been built near the rest-house. It is of pucca rubble work, plastered inside and pointed outside, with slabbed roof and red stone flooring. The pillars, door and window frames, Dasa, lintel and chujja are all of red stone. The doors and windows are of country fashion. It is complete with *lands* and iron pegs and hooks. The expenditure during the year has been Rs. 677-9-1.

11. **Gangapur Choki.**—A pucca choki similar to that at Hindaun has been built at Gangapur to serve as a rest tibara for inspecting officials. The expenditure during the year has been Rs. 304-3-11.

12. **Khurr Choki**—A kutchra-pucca choki similar to that of Hindaun has been built at Khurr to serve as a rest tibara for inspecting officials. Two rooms 8'×8' have been added at the back of the tibara for two mohafizs. The whole building is of kutchra-pucca rubble work plastered inside and pointed outside, with slabbed roof and katla flooring. The cost has been :—

					Rs.	a.	p.
Rest tibara	...	...	...	...	499	14	11
Mohafizs choki	...	...	...	...	257	13	11
					<hr/>		
				Total	757	12	10
					<hr/>		

13. **Outhouses, Overseer's quarters at Mahwa.**—Five outhouses of kutchra-pucca rubble work with slabbed roof have been built. Most of the work was done last year; doors, redstone flooring inside, plaster and whitewashing have been done in this year. The expenditure during the year has been Rs. 224-3-0.

14. **Mohafiz hut at Khari.**—A hut 16'×7½' has been built of mud masonry with a red sandstone roof set dry. The cost has been Rs. 84-3-0.

15. **Choki Jaisagar Tond.**—A choki for mohafiz 9'×8' has been built at the Tond village. It is of kutchra-pucca rubble work, with slabbed roof, cost being Rs. 149-2-6.

16. **Post Office, Hindaun.**—The outer walls of the building have been raised to prevent the risk of thieves climbing in. The inner rooms have been whitewashed. The cost has been Rs. 143-9-6.

17. **Post Office, Mahwa.**—This is a Government building. It has been coloured and whitewashed and some petty repairs to plaster done. The cost, Rs. 36-15-9, has been paid by Government.

18. **Dispensary at Hindaun.**—The inside of the dispensary has been coloured and whitewashed at a cost of Rs. 29-0-11.

19. **Dispensary at Mahwa.**—Rupees 4-13-6 have been spent in putting the wind vane into working order.

20. **Thanah Building at Hindaun.**—The terrace of the roof has been renewed. The cost has been Rs. 98-12-3.

21. **Hindaun Jail.**—The following petty works have been done :—

- (a) A door 6'×3½' with stone door frame provided in female ward;
- (b) A latrine 5'×6' with corrugated iron walls and roof erected in the female ward;
- (c) A cutstone drain 19½ft. long near the urinal made;
- (d) Male latrine wall raised 8½'×2½'. The cost has been Rs. 77-6-7.

22. **Raingauge Platforms.**—Raingauge platforms 2'×2'×2' have been built at Tahsils Toda Bhim, Ratanzillah and Vazirpur at a cost of Rs. 3 each.

23. **Choki Bishan Samand.**—Thatch roofs of moharris and mohafiz's huts have been renewed, and two doors at either entrances provided. Cost Rs. 89-6-8.

24. **Gangapur Choki.**—Gangapur Choki compound has been provided with a wooden gate with pucca pillars.

25. **Vazirpur Choki.**—The thatch roof of the Vazirpur Choki has been renewed for Rs. 12.

26. **Mahwa Choki.**—Repairs to compound wall and thatching of sepoy's shed done.

27. **Fateh Sagar Choki.**—Thatching 19' × 18' and 16' × 16' have been renewed for Rs. 39-7-2.

28. **Toda Bhim Choki.**—Petty repairs done and thatches renewed, cost being Rs. 43-10-1.

29. **Cotton Press, Mandawar.**—The platform has been metalled with kunkur, the cost being Rs. 136-7-6. The corrugated iron roof of the chokidar's hut, which was blown away, has been re-set at a cost of Rs. 4-13-6.

III.—JAIPUR AND AGRA ROAD FROM MILE 4 TO $75\frac{1}{2} = 72\frac{1}{2}$ MILES.

30. **Average cost per mile.**—The total expenditure during the year has been Rs. 16,274-13, which gives an average of Rs. 224-7-9 per mile for maintenance and repairs.

31. **Kunkur.**—Kunkur has been collected in miles 8, 15, 22, 23, 26, 52, 58, 62, 64 and 76 for third layer, and miles 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 18, 19, 22, 23, 24, 25, 33, 34, 41, 42, 45, 46, 47, 49, 50, 51, 56, 57, 63, 64, 65, 66, 67, 68, 69, 72, 73, 74 and 76 for repairs.

					C. ft.
For 3rd layer	...	...	...	...	1,17,636
„ repairs	...	...	...	...	36,853
Total					1,54,489

32. **Consolidation.**—Third layer consolidation 10 ft. wide has been done in miles 4, 5, 6, 8 and 64 in full; in miles 22, 33, first halves; in miles 23, 52 and 58, second halves; and in mile 25 one-fourth.

Cart tracks have been remetalled in mile 36, and general repairs to all the miles wherever necessary :—

3rd layer	...	...	...	...	403,170 s. ft.
Cart-track	...	...	...	...	31,680 „ „
General repairs	...	...	...	...	225,795 c. ft.

33. **Earthwork.**—Earthwork to patrics 13ft. wide has been done in miles 4, 5, 6, 8 and 64 in full; in mile 22, 33, first halves; in miles 23, 52 and 59, second halves; and in mile 25, one-fourth; total 758,099 c. ft.; for ordinary repair 3,09,102 c. ft.

34. **Kanota Causeway.**—Kanota Causeway, Mile No. 8 :—

Silt clearance done	...	...	...	...	102,970 c. ft.
Consolidation of kunkur	...	...	...	...	5,801 s. ft.

35. **Road Choki.**—A road choki has been built at Semla, mile 22, 16' × 9' inside, with a verandah 17' × 8' in front. It is of kutchia-pucca rubble work, plastered outside, with a corrugated iron roof. The cost has been Rs. 265-8-3.

36. **Pancholi Bungalow.**—Pancholi bungalow repairs to doors and ventilators done. A hut 20' × 7' for sweeper, consisting of kutchia walls and thatched roof, prepared; and the thatch of beldars' hut renewed.

37. **Income.**—The income from road has been Rs. 164-6-0 as under :—

					Rs.	a.	p.
Sale of dry trees	...	...	...	...	57	5	0
„ „ patras	...	...	...	...	76	14	0
„ „ grass	...	...	...	...	4	0	0
„ „ poolas	...	...	...	...	3	3	0
Rent of Dosa bungalow	...	...	...	...	18	0	0
„ „ Pancholi „	...	...	...	...	5	0	0
Total					164	6	0

NAILA BRANCH, 5 MILES.

38. **Kunkur.**—Kunkur has been collected in mile No. 11 for 3rd layer, 4,148 c. ft.

39. **Consolidation.**—Third layer consolidation done in miles 9 and 11; and ordinary repairs done to all the miles, total 34,814 s. ft. Total expenditure has been Rs.115-3-3.

JHIR LINK ROADS.

40. **Link Road.**—Link road from Jhir railway station to Jaipur and Agra Road and a portion joining this link road to the latter have been completed. They are 2,683 ft. and 1,910 ft. in length, total 4,593 ft. long, 10 ft. wide, consolidated in two layers, the lower being of ballast and upper of kunkur, each $4\frac{1}{2}$ inches thick. The side berms are 13 feet wide each. The cost has been Rs.915-3-7.

JATWARA LINK ROAD.

41. **Link Road.**—Link road from Jatwara railway station to Jaipur and Agra Road, 2,750 ft. long, has been consolidated in two layers of kunkur 4 inches thick each. It is 10 ft. wide and has side berms 13 feet each. The cost has been Rs.590-7-8.

MANDAWAR AND KAROLI ROAD, 43 MILES.

42. **Average cost per mile.**—The total expenditure during the year has been Rs.14,419-11-10, which gives an average of Rs.328-5-10 per mile for maintenance and repairs.

43. **Kunkur.**—Kunkur has been collected in Bazar road, miles 26, 33, 34, 38, 39, 40, 41 and 43 for 3rd layer, and in miles 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 42 and 43 for repairs.

				C. ft.
For bazar road	...	...	...	10,734
„ 3rd layer	...	...	...	82,866
„ repairs	...	...	...	51,524
Total				145,124

44. **Morind Clay.**—Morind clay has been collected in miles 33, 34, 36, 37, 38, 41, 42 and 43 for binding “Bahao” river washed kunkur, total 28,490 c. ft.

45. **Consolidation.**—Third layer consolidation 10 ft. wide has been done in miles 1, 16, 21, 22, 27, 35, 36, 37 and 42 in full; mile 38, first half; and miles 25, 33 and 34, second halves. General repairs done to all the miles wherever necessary.

				S. ft.
3rd layer	...	...	...	608,929
Repairs	...	...	...	401,778

46. **Earthwork.**—Patries of all the abovementioned miles have been repaired and cleared of grass, etc., to 12 feet width.

47. **Gambhir River Causeway.**—For the convenience of cart traffic red stone slabs are laid across the sandy bed of the Gambhir river in mile 27, after the rains, and removed before the monsoon.

48. **Dry rubble pitching.**—Dry rubble pitching, $35' \times 11\frac{1}{2}'$ has been laid at the lower stream side of the pucca road dam in mile 18.

49. **Well Duct.**—A well duct 12 ft. long has been provided in mile No. 8.

50. **Petty Repairs.**—Petty repairs have been done to the parapet of the Nehri bridge.

51. **Mahwa Bungalow.**—The thatches of the khansamah and sweeper's houses have been renewed; total work done 858 s. ft.

52. **Income.**—The income from the road has been Rs. 406-5-0 as per detail below :—

				Rs.	a.	p.
Sale of dry trees	...	...	...	172	13	0
" " grass and poolas	...	...	...	72	4	0
" " patras	...	...	...	42	4	0
Mandawar Bagichi	...	...	...	19	0	0
Rent of three bungalows	...	...	...	100	0	0
"						
Total	...	...	...	406	5	0

**DOSA SAWAI-MADHOPUR ROAD, 52 MILES; 1st SECTION, FROM
DOSA STATION TO LALSOTE, 24 MILES.**

53. **Metalled and unmetalled Road.**—Out of 24 miles of this road 17 miles, Nos. 1, 2, 4, 7, 8, 11, 12, 13, 14, 15, 16, 20, 21, 22 and 23, being sandy, are metalled and the rest unmetalled.

54. **Kunkur.**—Kunkur has been collected in miles 16 and 17 for new metalling in two layers; miles 10, 12, 15, 22 and 23 for 3rd layer, and miles 4, 7, 10, 11, 12, 13, 15, 22 and 23 for repairs.

				C.	ft.
For new metalling	...	...	...	71,936	
" 3rd layer	...	...	...	70,758	
" repairs	...	...	...	8,617	
Total	...	...	...	151,311	

55. **Consolidation.**—First half of mile 7 has been metalled anew with two layers of kunkur $4\frac{1}{2}$ inches thick each.

Third layer consolidation 10 ft. wide has been done to mile 10, second half, and mile 23, first half; and general repairs done in all the miles; total 21,200 s. ft.

56. **Earthwork.**—Earthwork to patries 12 feet wide has been done in miles 7, first half, 10 second half, and 23 first half; total 75,460 c. ft.

General repairs to road done 61,695 c.ft.

The expenditure on this road, both sections, has been Rs.7,768-4-7.

57. **Choki at Nagal.**—The road choki at Nagal, mile No. 11, has been repaired, roofed with tiles, and thatches renewed.

2ND SECTION, FROM MILE 25 TO 52.

58. **Fair weather road.**—This is an unmetalled fair weather road. The following work has been done :—

Earthwork	...	...	...	72,936	c ft.
Clearing bushes	...	...	...	380,160	s.ft.

59. **Income.**—The income from road has been Rs. 60 as under :—

				Rs.	a.	p.
Sale of dry wood	...	...	...	30	8	0
" patras	...	...	...	21	8	0
" mango fruits	...	...	...	8	0	0
Total	...	...	...	60	0	0

LALSOTE-GANGAPUR FAIR WEATHER ROAD, 27 MILES.

60. **Repairs.**—Repairs consisting of filling holes and cuts, putting right the approaches of nullahs and clearing bushes have been done :—

Total earthwork	...	...	...	48,767	c ft.
Cutting bushes	...	...	...	1,710,720	s.ft.
The cost has been Rs 246-14-4.					

BHAROTI-GANGAPUR FAIR WEATHER ROAD, 27 MILES.

61. Repairs.—Repairing earthwork and clearance of jungle have been done :—

Earthwork	...	...	...	...	48,767 c.ft.
Clearing jungle	...	...	...	...	1,710,720 s.ft.

The cost has been Rs.178-3-6.

HINDAUN-GANGAPUR FAIR WEATHER ROAD, 24 MILES.

62. Kunkur, etc.—The following work has been done :—

					C.ft.
Earthwork	...	...	...	...	83,139
Kunkur	...	...	...	...	9,204
Gambhir river approaches	...	...	...	...	9,204

63. Income.—The income from road has been :—

					Rs.	a.	p.
Sale of dry trees	...	...	...	...	15	0	0
„ pala	...	...	...	...	3	12	0
„ patras	...	...	...	...	2	0	0
Total	...	...	...	...	20	12	0

The expenditure has been Rs.614-9-9.

LAKA-GHATI ROAD, 3 MILES.

64. Repairs.—The road has been cleared 6 ft. wide for the full 3 miles and repaired wherever necessary.

The cost has been Rs.53-13-3.

RAMGARH IRRIGATION WORKS.

IV.—IRRIGATION WORKS, ORIGINAL.

65. Tank.—The tank filled $36\frac{1}{2}$ ft. out of 60 ft., which is equivalent to 785 million c.ft. of water, capable of irrigating 10,625 bighas.

66. Retaining wall.—This was completed last year. An ornamental gateway leading to the bund, with two small marble chatries $3' \times 3' \times 11\frac{1}{2}'$, one at each front top corner, have been erected now.

The passage between the two central corewalls has been covered over with slabbed roofing. It is 52 ft. long, 12 ft. wide and 19 ft. high.

67. Cook-house —A cook-house $12' \times 9'$ has been built close to the bungalow. It is of pucca rubble work, plastered inside and out, with slabbed roof and katla flooring. It has a door in front and a window at the back ; and two ventilators and a chimney above the cooking place for exit of smoke. A *tand* and a shelf with perforated zinc door have also been provided.

The cost has been Rs.268-15.

68. Cart bridges.—Seven more new cart bridges have been built this year. They are all of one standard plan. The roadway between the parapets is 12 feet. All are provided with cutstone grooves at the upstream side to raise the level of water in the canal if necessary. The total number of bridges built up to date is 28.

69. Culverts.—Fifteen culverts over side ducts have been built. They are all of one standard plan, having one opening $2\frac{1}{2}$ feet wide, covered over with katla roofing. The roadway between the parapets is 13 feet wide.

70. Crossing sluices.—Two crossing sluices in the main canal and thirty-two in the rajbhas have been built for raising the level of water to facilitate irrigation. The main canal sluices have three openings $5\frac{1}{2}$ feet wide each, and the rajbaha sluices only one opening $3' 5''$ wide. All are provided with cutstone grooves for putting in planks.

71. Well ducts.—Three more well aqueducts have been built. They are similar to those built before. Total number of well ducts built up to date is seven.

72. **Rajbahas sluices.**—One rajbaha sluice for Jaisinghpura village has been built. It is similar to those built before. The total number of rajbaha sluices built up to date is 40. All the rajbahas head sluices are now provided with screw arrangement for opening and shutting sluices.

73. **Rajbahas.**—Seven new rajbahas, of a total length of 10.7 miles, have been dug out. They are from 10 to 6 ft. wide at bottom, with side slopes 1 in 1 and bed slope from 2 to 5 ft. per mile. The total length of rajbahas ready now is 70.2 miles.

74. **Chokies for Mohafizs.**—Four chokies for Mohafizs have been built at Bhanpur, Parasoli, Thakaran ki Dhani and Nagal. They are all of pucca rubble work with a slabbed roof, measuring 9' x 8' inside, with verandah in front 9½' x 4'. Six kutcha houses with corrugated iron roofs have also been built for the use of Abpashi Department as under :—

					No.
At Baori	...	...	...	...	4 x 11' x 8'
„ Parasoli	...	...	...	...	1 x 12' x 9'
„ Bhanpur	...	...	...	...	1 x 12' x 9'

MAROLI BUND.

75. **Project.**—The project consists of diverting Maroli nullah water into Madho Sagur Garoli. Madho Sagur has a capacity of 838 million c.ft., and the water available from its drainage area (26 sq. miles only) is about 130 million c.ft.; hence the necessity for adding to the supply. The supply cut to Madho Sagur and most part of the bund across the Maroli nullah, consisting of a massive masonry face wall backed with earth, were already built. Only a gap of about 260 ft. at the north end of the bund had to be filled up, and a regulating sluice provided in the supply cut. The gap was duly closed before the rains with a masonry corewall with an earthen slope in front and a rubble stone backing on the downstream side.

The corewall was 2 ft. thick at the top, 6 ft. at bottom, having 3-inch offsets at every 6 ft. in height, and 45 ft. high, being 10 ft. higher than the H. W. L. 35 ft.

The foundation was carried down 10 ft. below the bed of the nullah.

The inside earthen embankment was 6 ft. thick at the top with a slope of 1 in 2 and 41 ft. high, being 6 ft. above H. W. L. The rubble backing at the rear was 5 ft. thick at top and 41 ft. high. Its outer slope was 1 to 1 broken in two places with a 5 ft. berm at each stage.

The old face wall was raised 2 ft. and built up level with the new corewall. The earthen bank, backing the face wall, was duly repaired and raised 3 ft. The regulating sluice was also completed before the rains.

It consists of a strong masonry wall 12 ft. thick with 3 openings 3 ft. diameter each : two on a level with the bed of the supply cut 18 ft. above the nullah bed, and one 5 ft. lower. All these openings are lined with cut stone one foot thick and provided with iron sluice valves worked by screwed rods at the top.

The first flood came on the 19th July and filled the tank 33 feet deep. No damage was done to the new work, but a good deal of leakage took place in the old face wall, which crept along its outer face and began to wash away the earthen backing where the new work joined the old. The dry rubble backing at the rear was extended some 50 ft. more to the west to keep the earth from being washed away, which proved effectual. This water was duly led into Madho Sagur by the supply cut.

On the 8th August, however, there was an exceptionally heavy fall of rain in this locality, some 8 inches being registered in 24 hours, so that an extraordinary flood came down the nullah; and in about 6 hours the water in the bund rose to the 43 ft. level, being 8 ft. above H. W. line and within 2 ft. of the top of the corewall. This happened notwithstanding the continuous discharge of water by the waste weir 50 ft. long and 8 ft. deep. The leakage in the old face wall increased considerably; the earthen backing near the dry rubble pitching was washed away, then the old face wall here gave way and the bund breached. The water also overflowed the outlet sluice and carried away a portion of the south wing wall

and tore down the bank of the supply cut some 50 ft. wide and 10 ft. deep. An inspection of the broken end of the old face wall at the gap shows that the wall is not properly founded or built. It is about 16 ft. thick, of which 2 ft. on the water face is of an inferior class of pucca rubble masonry work, while the rest is of stone and mud.

The foundation is only about 2 ft. deep.

The cost of the work has been Rs. 19,190-13-1.

It is not known when this old face wall was built, but it is said to have been constructed by *Banjaras* many years ago.

The failure of the bund is entirely due to the inferior masonry in the old work.

BARIKA THOR BAIRAT.

76. **Crossing sluices.**—Ten crossing sluices have been built in the canal to facilitate irrigation. They consist of straight walls 15 feet long each with an opening 3 feet wide in the centre provided with cutstone grooves for planks.

77. **Side ducts.**—Ten side ducts of 3 feet bottom width and of a total length of 112½ feet have been dug out and provided with masonry sluices.

78. **Escape.**—One escape 60 feet wide has been built anew, and another widened 20 feet. The cost has been Rs. 547-2-9.

MADIHO SAGAR GAROLI.

79. **Eastern Canal.**—The eastern canal has been realigned, cleared out, and made uniformly 10 feet wide at bottom. It is 4½ miles long. The cost has been Rs. 311-14-6.

80. **Rajbaha sluices.**—Fifteen new rajbaha sluices have been built along the eastern canal to facilitate irrigation. They are all of one standard plan, having one opening 3' × 2' provided with cutstone grooves for planks and a culvert under the canal bank 15 feet long roofed with katlas.

81. **Escapes.**—The abutments, piers and wing walls of two escapes have been raised 1½ feet.

82. **Extension of Eastern Canal.**—The eastern canal has been extended 5,706 feet long to command more land for irrigation. It is 10 feet wide at bottom with side slopes of 1 in 1 and bed slope 2 feet in a mile.¹

The masonry works in connection with the extension remain to be done.

RAYANWALA BUND.

83. **Masonry sluice.**—One masonry sluice 3' × 2' for Thali rajbaha has been built in the main canal, cost Rs. 30-12-1.

84. **Small pucca sluices.**—Thirteen small pucca sluices for side ducts have been built in the main canal to facilitate irrigation. They have circular openings 6 inches diameter each, closed by wooden plugs, cost Rs. 127-12-9.

KHURR BUND.

85. **Masonry sluices.**—Eight new masonry sluices for side ducts have been built in the north main canal. They have circular openings 9 inches diameter each, closed by wooden plugs, cost Rs. 121-10-5.

GAYTOLAO TANK.

86. **Tank.**—The drainage of Khon and Dhoola hills is caught now by the Ramgarh canal and led into this tank.

Therefore it was considered advisable to increase the capacity of the tank. The high water line was raised 2 feet last year, and the earthen embankment has now been extended 1,400 feet to the north. Total earthwork done is 110,723 c.ft., costing Rs. 294-7-9. The tank filled brimful this year and is expected to yield a good return.

SANOLI BUND.

87. **Cart bridge.**—One new cart bridge of one span 4 ft. wide covered over with Bhankri slabs has been built over the main canal near Lotwara village. The roadway is 12 ft. between the parapets. The cost has been Rs.90-4-1.

MORAN SAGAR.

88. **Tank.**—The high water line of this tank was raised 2 feet last year, therefore it became necessary to raise the corewalls, which has been done now. The corewalls have been raised 2 ft. above the H. Water line, and some earthwork done.

					C.ft.
Total rubble work	...	...	...	...	6,235
Total earthwork	...	...	...	...	46,818

The cost has been Rs.1,225-1-9.

89. **Crossing sluices with two openings.**—Two crossing sluices consisting of two openings $2\frac{1}{2}' \times 4\frac{1}{2}'$ with two side sluices have been built in the 4th branch near Johra village.

90. **Masonry sluice with three openings.**—A masonry sluice with 3 openings of $3' \times 3'$ has been built in the 4th branch near the new Bamnawas duct; cost Rs.551-14-1.

91. **Crossing sluices with a side sluice.**—Seven crossing sluices with a side sluice attached to each $3' \times 3'$ have been built in the Bamnawas duct; cost Rs.254-1-3.

92. **Masonry sluices with one opening.**—Two masonry sluices with one opening $4' \times 4'$ in each have been built in the 5th and 6th branches; cost Rs.241-1-3.

93. **New Duct.**—A new duct 2,000 ft. long 6 ft wide with side slopes 1 in 1 has been dug out from 8th branch to Kharola village. Earthwork done is 24,235 c. ft.; cost Rs.88-9-6.

94. **Zemindari Duct.**—A zemindari duct from Nuddi branch No. 5 to Subejpura from 3 to 7 feet; earthwork done 60,125 c.ft.; cost Rs.85-7-9.

SHANKAR TALAO GOOJAR THIKARYA.

95. **Masonry Dhana.**—One new masonry Dhana for lift irrigation has been built; cost Rs.124-6-5.

Pucca masonry 664 c. ft. and earthwork 11,802 c.ft.

96. **Banjari Duct.**—The Banjari duct has been widened from 1 to 4 ft.; total earthwork done 11,930 c. ft.; cost Rs.35-13-9.

RAM SAGAR MALARNA CHOR.

97. **Aqueduct.**—A masonry aqueduct has been built for the central canal; the waterway is 6 ft. wide; cost Rs.11-8-0.

RAMAWALA BUND.

98. **Masonry Sluice.**—A masonry sluice consisting of two openings 4 ft. wide, each with wooden shutters, has been built in the supply cut; cost Rs.94-3-0.

BINORI SUPPLY CUT.

99. **Well aqueducts**—Eleven red stone well aqueducts have been built near Lewali for the convenience of zemindars. Cost has been Rs.265-8-10.

SAINTIAL SAGAR.

100. **North Canal.**—The work of the high level north canal was commenced last year and has just been completed. The canal is 4 miles long 10 ft. wide at bottom, with side slopes of 1 in 1 and bed slope 2 ft. in a mile. The work done is—earthwork 951,762 c. ft. and rock cutting 123,525 c. ft.

101. **Rajbahas.**—Nine rajbahas of a total length of 6 miles 12 chains and bottom width 3 ft. have been dug out; total earthwork done 61,662 c.ft.

102. **South Canal.**—South high level main canal to Bapi village with pucca head sluice and six rajbahs have also been completed. The canal is $5\frac{1}{2}$ miles long, 10 ft. wide at bottom, with side slopes 1 in 1 and bed slope 2 ft. in a mile.

The following is the work done :—

					C.ft.
Pucca rubble work	...	...	...	...	4,140
Earthwork	...	...	...	...	1,225,113
Rock cutting	...	...	...	...	4,102

The total length of the six rajbahs is 5 miles 15 chains and bottom width 3 ft.

The expenditure during the year has been Rs.3,944-4-4.

103. **Masonry sluice.**—A masonry sluice with one opening of $3' \times 3'$ has been built at the Sinoli Supply Cut for Dadanka village. The cost has been Rs.163-3-4.

BUND BARIAL.

104. **Supply Cut.**—A supply cut 2,200 feet long, 10 ft. wide, has been dug out to divert a small nullah into the bund, cost being Rs.230-8-9.

NAZIMWALA TANK, BAMNAWAS.

105. **Sluice of six openings.**—A masonry sluice consisting of six circular openings of 6' diameter, each closed by wooden plugs, has been built to regulate irrigation.

106. **Sluice with three openings.**—Another sluice with three circular openings of 6' diameter has been built for the new Bamnawas duct.

Cost has been Rs.286-6-0.

BARAGAON BUND.

107. **Canal.**—The eastern canal has been dug out $2,800' \times 9'$, and western canal $8,700' \times 12'$; cost Rs.795-4-5.

BANYAWALA BUND.

108. **Bund.**—On account of the difficulty of procuring labour in this locality the work has not quite been completed as yet.

Total 191,872 c.ft. of earthwork has been done during the year in a length of 1,200 ft. The expenditure has been Rs.179-11-11.

JALSAIN TANK.

109. **Embankment.**—The embankment having settled was made up. Total earthwork done 67,999 c.ft. in a length of 9,200 ft.; cost Rs. 1,981-5-7.

V.—IRRIGATION WORKS (REPAIRS).

110. **Ramgarh Tank.**—Rupees 1,089-5-6 have been spent in the repairs and maintenance of the main canal 22 miles long and rajbahs of an aggregate length of 70 miles.

111. **Madhosagar Garoli.**—Rain repairs consisting of filling holes, closing gaps, clearing silt, and making diversion cuts have been done; cost being Rs.234-4-0.

112. **Boochara Bund.**—A ramp $35' \times 21\frac{1}{2}'$, with a curtain wall 50 ft. long and a dry rubble pitching $50' \times 10'$, have been provided at the downstream side of the superpassage at Bhonawas village. The cost has been Rs.327-15-3. Rupees 1,133-5-9 have been spent on maintenance and repairs to the main canal and rajbahs.

113. **Rayawala Tank.**—Three aqueducts have been duly repaired, cost Rs.220-15-1.

A new water gauge has been provided and canals repaired and cleared of silt,

Total earthwork done 33,114 c. ft.; cost Rs.67-14.

Choki of Mohafiz has been repaired, doors and chokhats provided, and roofed with tiles; cost Rs.34-4-8.

114. **Bund Khurr.**—A new water gauge has been provided, sluice rod put right, and canals repaired and cleared of silt. Total earthwork done 58,388 c. ft.; cost Rs.133-8-1.

115. Bund Nimla.—Water gauge has been provided; cost Rs.1-14.

116. Nimolao, large.—Owing to heavy rainfall the bund breached this year. The gap has been duly repaired. Total earthwork done is 14,487 c. ft., cost being Rs.41-10-6.

A new water gauge has been provided, cost Re.1.

A gap in a small zemindari tank of Dhaker village near Nimolao was repaired at a cost of Rs.10. This tank has duly filled this year.

117. Bijaysagar Baswah.—On account of heavy rainfall this bund had breached in July. The gap has been duly filled up. Total earthwork done is 32,461 c. ft., costing Rs.103-10-7.

A new water gauge has been provided at the sluice, and petty repairs to tilting shutters done; cost Rs.4-14.

118. Sanoli Bund.—The supply cut and canals have been cleared of silt (52,751 + 8,817 c. ft.) = 61,568 c. ft.: a new water gauge has been provided.

The thatch of the Mohafiz's hut was renewed and petty repairs to the choki done.

Total cost has been Rs.133-13-1.

119. Moran-Sagar.—Branch No. 8 has been repaired and cleared of silt; total earthwork done 59,031 c. ft.; cost Rs.137-6.

Silt of sluice in 4th branch lowered one foot, and petty repairs done to curtain wall and parapets, Toda bridge; cost Rs.19-8-9.

120. Moran Kund.—Repairs to masonry and plaster and dry rubble pitching of the pucca irrigation duct done; cost Rs.19-8-3.

121. Ram Sagar Malarna Chor.—A new water gauge has been provided in the sluice, and canals cleared of silt. Total earthwork done 4,981 c. ft.; cost Rs.40-4-6.

122. Dehira Tank.—Canals have been cleared of silt. Total earthwork done 7,229 c.ft. cost Rs.15-7-0.

123. Jaisagar Tond.—Canals have been cleared. Total earthwork done 67,516 c.ft.; cost Rs.142-12-9.

124. Bund Bharoti.—New wooden shutters 17 s. ft. have been provided for the sluice and the canals have been cleared of silt; cost Rs.10.

125. Naglao Tank at Bonli.—The sluice has been cleared up of silt 3,928 c.ft; cost Rs.3.

126. Haripura Bund.—The bund had breached owing to heavy floods. The gap has been duly repaired. Total earthwork done is 28,831 c.ft.; cost Rs.122-5-0.

127. Ramawala Bund.—A new water gauge has been provided at the sluice and the canals cleared of silt 5,165 c.ft.; cost Rs 8-15-6.

128. Binori Supply Cut.—New wooden shutters have been supplied in lieu of old ones at the double head sluice.

Arrangement for locking the sluices of Nwand village has been made to prevent the zemindars from opening the sluices of their own accord.

Masonry wing walls $10' \times 1\frac{1}{2}' \times 7'$ have been provided to two falls on the Seetapura Koli branch. The cost has been Rs.227-13-9.

129. Bishan Samand.—Repairs have been done to the outlet sluice, a wooden cover and a door provided; cost Rs.13-1-11.

Eight wooden shutters have been provided for canal sluices; cost Rs.39-1-4.

Petty repairs have been done to well ducts Ramawala and Tursul at the supply cut; cost Rs.5-2-10.

The canals and supply cut have been repaired and cleared of silt; cost Rs.238-0-5.

130. Maheswa Bund —Necessary repairs to sluice have been done and 17 wooden plugs provided; cost Rs.60-5-11

131. Fatehsagar.—Petty repairs to bund and sluice and silt clearance of canal have been done; cost Rs.286-13-0.
132. Hoda Heli Canal.—Canals have been repaired and cleared of silt; cost Rs.120-2-6.
133. Bund Khari.—Canal has been repaired and cleared of silt; total earthwork done 1,240 c. ft.; cost Rs.2-10-0.
134. Jatwala tank.—Canals have been cleared of silt; cost Rs.6-11-0.
135. Gandai Tank.—Canals have been repaired and cleared of silt; total 6,949 c. ft., earthwork done at a cost of Rs.14-9-6.
136. Johriwala Bund.—Both canals have been cleared of silt, 13,757 c. ft.; cost Rs.39-8-9.
137. Bara Talao.—Canal cleared of silt 3,750 c. ft.; cost Rs.10-5-6.
138. Moti Sagar.—Repairs to embankment done 18,000 c. ft.; cost Rs. 29-12-3.
139. Hurla Bund.—Petty repairs have been done to the supply cut; cost Rs. 12.
140. Rundh Jagrampur Bund.—Repairs have been done to the supply cut; total earthwork 5,725 c.ft.; cost Rs.11-14-6.
141. Bund Kote.—The supply cut cleared of silt; cost Rs.3.
142. Tailanwala Bund.—Repairs have been done to the bund; cost Rs.20-11-6.

(Sd.) RUPCHAND,
Assistant Engineer.

ANNUAL REPORT

OF

BABU KALODA NANDAN MOOKERJI

Assistant Engineer'

JAIPUR STATE

FOR THE

YEAR ENDING 31ST AUGUST 1903.

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ANNUAL REPORT of Babu K. N. Mookerji, Assistant Engineer P.W.D., Jaipur, for the year ending 31st August 1903.

1. **Introduction.**—This report contains a brief account of all works executed in the Central Division between 1st September 1902 and 31st August 1903.

2. **Statement of Expenditure.**—In all, on both Establishment and Works, Rs.22,776-14 have been spent, out of which payments amounting to Rs.18,218-2 have been made through the Head Office.

The statement below shows all details of receipts and disbursements as passed through the Central Division office books.

No.	Heads of works.	Debtor.	Creditor.	REMARKS.
	To Balance on 1st September 1902	Rs. a. p.	Rs. a. p.	
		...	C. 2,168 9 9	
1	Superintending Engineer's account	50 0 0	J. 2,020 0 0	
2	Sheedoongri Bund	88 11 9	...	
3	Jaipur and Tonk Road	J. 2,219 12 6	196 12 0	
		C. 1 3 3		
4	Chaksu Station Link Road	61 2 6	...	
5	Unclaimed Wages Account	96 12 6	86 13 0	
6	Halolao Tank at Newai	35 12 6	...	
7	Kothun and Lalsote Road, fair-weather	18 0 3	...	
8	Repairs to Noota Tank	111 0 0	...	
9	Rai-ing 3' Pall Bund Chandlai	42 10 3	...	
10	Repairs to Amanisha new Supply Cut	43 10 3	...	
11	Repairs to Chandlai Supply Cut	114 6 0	...	
12	Rent account of Dik Bungalows	...	J. 26 8 0	
			C. 5 0 0	
13	Fine Account	...	19 0 0	
14	Silt Clearance of Sangamere Canals	16 6 6	...	
15	Raising 2' Pall Bund Rubasta	15 3 6	...	
16	Profit and Loss Account	207 11 0	14 0 0	
17	Banas-Chambal Road repairs	513 13 3	20 0 0	
18	Lakhanpur and Jamroli Bund Surveys	7 0 6	...	
19	Bund Bassei, Tehsil Newai	38 3 0	...	
20	Repairing tanks along Tonk Road	41 12 3	...	
21	Survey of Lohara Bund Project	38 13 6	...	
22	Guarding tanks along Tonk Road	66 12 6	...	
23	Repairs to Bund Chandlai	13 8 9	...	
24	Making a window in compounder's cook-house and tiled roofing over chabutra in Guard House at Madhopur.	5 0 0	...	
25	Bund Bokrawas Survey	43 12 0	...	
26	Bund Kadera Survey	30 11 6	...	
27	Security Deposit Account	50 0 0	50 0 0	
28	Contouring tanks along Tonk Road	35 11 9	...	
29	Works for Cononation Durbar, Delhi	9 0 0	...	
30	Clearing Canals of Bunds along Tonk Road	2 0 0	...	
31	Repairs to kutcha road from Sheodaspura to Chandlai.	33 8 9	...	
32	Repairs to Chaksu Dik Bungalow	42 0 9	...	
33	Surveys for Irrigation Projects	14 13 6	...	
34	Repairs to Khurras over Banas-Chambal fair-weather road.	5 11 6	...	
35	Clearing sand from the mouth of Chandlai Supply Cut	1 15 9	...	
36	Miscellaneous advances	356 0 0	459 11 9	
37	Thana Buildings in Shekhawati	18 0 0	...	
38	Katli Inundation Cut	10 0 0	...	
		C. 1 3 3	C. 7 0 0	
	Total	J. 4,557 8 9	J. 5,061 6 6	
	Balance in hand on 31st August 1903	J. 503 13 9	...	
		C. 5 12 9	...	
	GRAND TOTAL	J. 5,061 6 6	5,061 6 6	
		C. 7 0 0	7 0 0	

3. **Journal.**—The Assistant Engineer's journal shows the distance travelled in inspecting and checking works in the districts to be:—

	Miles.
By road	905
By rail	1,158
Total	2,063

4. **Office Work.**—Besides the usual routine work, the following is a brief summary of the work done :—

	No.
1. Letters received and despatched (English) ...	669
2. Do. do. (Persian) ...	1,208
3. Muster rolls and pay sheets checked ...	283
4. Contractors' and other bills prepared and checked in detail ...	149
5. Final bills for completed works prepared and submitted ...	81
6. Ledger heads kept ...	38

5. **Estimates.**—Forty-five estimates of different new projects and maintenance works have been prepared and submitted to the Head Office.

6. **Imarat Final Bills.**—Disposed of 81 final bills of the Imarat Department after going through such items as admitted of check.

7. **Work in Head Office.**—Worked in the Head Office regularly for two months while Lala Rup Chand, Assistant Engineer, was on leave; also, at intervals, for 15 to 20 days in each month, except while at the Delhi Coronation Durbar Camp.

8. **Delhi Coronation Durbar Camp.**—For two months together worked in the Delhi Coronation Camp; making all arrangements necessary there.

9. **Northern and Eastern Districts.**—In addition to the above and the Assistant Engineer's own office, the work of the Northern and Eastern Districts was supervised for two months during the absence of Lala Rup Chand, Assistant Engineer, on leave.

10. **Testimony to Establishment.**—There is only one clerk and one sub-treasurer, who both worked well and to my entire satisfaction. Lala Bijey Lal, clerk, is very attentive and hardworking.

Babu Gokul Chand, sub-overseer, is in charge of the Tonk Road sub-division. He has improved a good deal and works hard.

Lala Harsaran Dass, sub-overseer, was employed on survey and other maintenance works both for P. W. D. and Railway. His work is satisfactory and deserves mention.

B. Wajid Khan, temporary sub-overseer, worked up to the end of November, 1902 on contouring tanks, and was then transferred to the Western Districts.

11. **Head Office Stores.**—Checked stores and reported on the same to the Head Office.

12. **Gas Works Office.**—Checked Gas Works Office.

II.—ORIGINAL WORKS AND REPAIRS—BUILDINGS.

1. **Thana Buildings in Shekhawati.**—These thanas have been finished completely as reported last year. Rupees 18 have been spent on this head during the year for the wages of a godownee, who was in charge of the works before handing them over.

Final bills have also been submitted to the Head Office.

2. **Repairs to Sewai-Madhopur Dispensary**—(1) *Compounder's house.*—A window was opened and wooden doors supplied at a cost of Rs.12-12.

(2) *Guard house Verandah.*—Repairs to tiled roofing done and a stone slab and wooden balinda were supplied to support it. Total cost of this has been Rs. 11-7-3.

(3) *Dead House*—Rupees 15-2-6 was spent on this work in plastering and whitewashing where needed.

These works have all been completed and final bills submitted to Head Office.

3. **Uniara Dispensary.**—A window in the compounder's quarters has been opened out and the building supplied with wooden doors.

The total cost of this, including a wooden ladder for the dispensary, has been Rs.9-12. Final bill has been submitted.

4. **Chaksu Dak Bungalow Repairs.**—The bungalow has been white and colour washed and the plaster repaired where necessary, and the *chhappars* of the outhouses and cook-rooms renewed.

Total cost to completion is Rs.257-2-9 against a sanction of Rs.318, and the work has been billed up finally.

III.—REPAIRS TO ROADS, ETC.

1. **Fair-weather Road from Banas to Chambal.**—Total expenditure during the year has been Rs.513-13-3, and the road has been thoroughly repaired where necessary.

2. **Jaipur and Tonk Road, 32 miles, from 16 to 47.**—(a) *Average rate per mile.*—Total expenditure during the year has been Rs.8,552-10-6, which gives an average rate of Rs.267-4-4 per mile.

(b) *Kunkur collection.*—Total quantity collected was 156,799 c. ft. at a cost of Rs.5,463-12, details of which are as below :—

(1) For 3rd layer on miles 16, 20, 30, 34, 44 in full and 1st halves of 40 and 46, 127,241 c. ft. = Rs.4,394-0-9.

(2) For repairs on miles 17, 18, 19, 21, 24, 25, 27, 29, 31, 32, 33, 35, 36, 38, 40 to 43, 45, and 47, 29,558 c. ft. = Rs.1,069-11-3.

(c) *Kunkur consolidation.*—The total cost of this work has been Rs.1,131-8-3 as per detail noted below :—

(1) 3rd layer consolidation of mile 16 in full and 2nd-half of 33, 96,032 s. ft. = Rs.540-3.

(2) Repair (ordinary and rain) consolidation, 158,178 s. ft. = Rs.591-5-3.

(d) *Earthwork on Patries.*—Total expenditure has been Rs.302-13-3 as follows :—

Making up *patries* of miles with 3rd layer, 49,935 c. ft. = Rs.121-1.

Ordinary and rain repairs, 91,152 c. ft. = Rs.181-12-3.

(e) *Other works.*—Rupees 1,654-9 have been spent on other heads, viz :—

				Rs.	a.	p.
Establishment	...	...	...	1,120	0	3
Chaksu Dāk Bungalow Repairs	...	...	...	1	0	0
Tools and plant	...	...	...	59	10	0
Contingencies	...	...	...	212	7	0
Repairs to culverts, pucca road dams, weirs, etc., along the road	...	...	...	206	10	9
Repairs to Chauki Newai	...	...	...	28	11	6
„ Chaksu Tehsil Road	...	...	...	20	8	6
„ „ Station „	...	...	...	5	9	0
Total	...	...	...	1,654	9	0

(f) *General Remarks.*—Almost throughout the road the *patries* have been corrected to proper widths.

(g) *Income.*—The income from the road has been as under :—

				Rs.	a.	p.
Dry babul trees	...	..	...	109	0	0
„ „ branches	...	...	..	5	0	0
Babul patras	...	...	...	81	12	0
Savings of wages	...	...	...	1	0	0
Total	...	...	...	196	12	0

In addition to the above J. Rs.26-8 + C. Rs.5 have also been received for the rent of the Chaksu dāk bungalow.

3. Link Road from Chaksu Station to Tonk Road.—The total expenditure during the year on this road and on repairs, etc., under this sanction has been Rs.1,063-9 as detailed below :—

				Rs.	a.	p.
(a) Chaksu Station Link Road—						
Earthwork 92,613 c.ft.	...	...	...	198	9	3
Consolidation 59,623 s.ft.	...	...	...	672	1	0
Pitching (drystone) 372 c.ft.	...	...	...	14	14	0
Kunkur collection 200 c.ft.	...	...	...	1	0	6
Contingencies	...	...	...	18	9	0
Total	...	...	...	905	1	9
(b) Chaksu Station Goods-shed Road—						
Earthwork 4,500 c.ft.	...	..	...	9	0	0
Total	...	...	...	9	0	0
(c) Repairs to Chaksu Station Link Road—						
Drystone pitching 2,944 c.ft.	...	...	...	107	0	0
Earthwork 13,662 c.ft.	...	...	...	32	7	3
Cutting <i>akras</i> 2 miles ..	...	...	...	4	0	0
Milestones 3 miles	...	...	...	6	0	0
Total	...	...	...	149	7	3

(d) Remarks.—The road is now completely finished and the final bills have been submitted to Head Office.

4. Fair-weather Road from Kothun to Lalsote. (a) Maintenance.—The total expenditure on this road has been Rs.204-6, which includes jungle cutting, daghbelling both sides and planting babul seeds along the whole length of 25 miles, together with the necessary earthwork, etc.

(b) Consolidating Khurras.—On this head Rs.732-1-3 have been spent in completing the remaining works in connection with the khurras, details of which are as under :—

				Rs.	a.	p.
Kunkur collection 3,465 c.ft.	...	...	...	43	7	3
Morinda „ 2,311 c.ft.	...	...	...	57	12	6
Consolidation 43,800 s.ft.	...	...	...	492	12	0
Earthwork 52,550 c.ft.	...	..	..	105	1	6
Reconsolidation 13,200 s.ft.	...	...	...	33	0	0
Total	...	...	...	732	1	3

(c) Repairs to Metalled Khurras.—Some of the above were cut out in the rains, and have been repaired at a total cost of Rs.289-1, of which details are noted below :—

				Rs.	a.	p.
Kunkur collection 5,363 c.ft.	...	...	...	113	15	9
Morinda „ 2,243 c.ft.	...	...	...	44	13	9
Consolidation 18,840 s.ft.	...	...	...	105	15	6
Contingencies	...	...	...	24	4	0
Total	...	...	...	289	1	0

All the above works have been completed during the year and final bills submitted to Head Office.

5. Repairs to kutchra road from Sheodaspura to Chandlai.—The total expenditure on this head has been Rs.66-11-3. The repair done to earthwork cost Rs.13-7, and the remaining sum, Rs.53-4-3, is the cost of a *dhorah* made over the Chandlai Bund East Canal, which crosses this road.

6. Repairs to Khurras on the Banas-Chambal Road.—This work has just been taken in hand and Rs.5-11-6 have been expended this year in contingent expenses.

IV(a).—ORIGINAL WORKS—IRRIGATION.

1. Bund Sheodoongri.—The total expenditure during the year has been Rs.4,769-1-3 as per details below :—

	Rs.	a.	p.
(1) Inlet and escape at ch. 37 on 15ft. wide main canal ...	328	1	0
(2) Helolao tank at Chaksu ...	2,122	2	3
(3) Raising steining of Sallekhan's well to prevent submer- sion in Helolao tank ...	83	13	6
(4) Eleven <i>dhorahs</i> over canals, etc. ...	211	5	0
(5) Crossing sluice at ch. 37 on the main canal ...	248	13	9
(6) Double head sluice at ch. 69 on the main canal ...	227	4	0
(7) Bridge over Tonk Road, miles 24-25 ...	1,001	1	3
(8) Irrigation canals ...	250	5	6
(9) Other petty works ...	166	4	0
(10) Side sluices at ch. 15 and 86 ...	120	15	0

This work is now completely finished and billed up finally, with the exception of a Mohafiz Chauki at Chaksu, and its canals clearance, etc., against which Rs.105-12-6 have been already spent this year.

2. Halolao Tank at Newai.—The total expenditure during the year amounts to Rs.719-9-6, which has been spent in making up the earthwork of the slopes of the bund and in repairs, etc.

This work is also completely finished now and final bills will soon be submitted.

3. Bund Bassi.—The total expenditure on this work during the year has been Rs.2,470-14-9 on account of outstanding bills and payments.

The details are noted below :—

	Rs.	a.	p.
Main dam ...	1,049	3	3
Core-wall ...	523	9	0
Outlet sluice ...	287	1	0
Cutting waste weir ...	45	0	9
Canals ...	509	0	0
Supply cuts ...	57	0	9

The work has been completely finished and final bills, amounting to Rs.8,337-2, have been submitted against the sanction of Rs.9,356.

4. Katli Inundation Cut.—This work has been finished and settled up as reported last year. This year Rs.10 only have been spent on the wages of a godownee there during the rains.

IV(b).—IRRIGATION WORKS—REPAIRS.

1. Repairs and Maintenance.—Rupees 618-15 have been spent during this year on general repairs, etc., to tank embankments, canals and supply cuts.

2. Raising 3' embankment of Chandlai Tank.—The extension of the pucca sluice, which remained to be done, is now finished at a cost of Rs.297-5-9, and the final bills have been submitted to Head Office.

3. Chandlai Supply Cut repairs and building two new Falls.—Two new falls, 1(a) and 6(a), between falls Nos. 1 and 2 and 6 and 7, have been built to prevent water accumulating uselessly in the Supply Cut and being lost by evaporation and absorption.

The insertion of these two new falls and the lowering down of the crests of falls 2 and 7 will cause water to run freely down the cut without any accumulation or loss of water.

The expenditure to completion has been Rs.982-5-3 as detailed below :—

	Rs.	a.	p.
Fall No. 1 (a) ...	174	0	6
" " 6 (a) ...	282	9	0
Repairs and petty items ...	525	11	9

4. **Raising Pal of Bund Rabaota 2'.—**After spending Rs.46-2-6 in wooden planks for the sluice and building high water level matams, etc., this work has now been quite completed and final bills submitted.

5. **Making a well aqueduct in Mile No. 1 of Amanisha new Supply Cut.—**The total cost of this work has been Rs.115-2-9 against a sanction of Rs.142. Rs.69-1 were spent this year and the work completed and billed finally.

6. **Surveys.—**The total amount spent on surveys for irrigation projects during the year has been Rs.135-3 as follows :—

					Rs.	a.	p.
(1)	Lakhanpur Bund	...	...	...	...	3	14 6
(2)	Jamroli	„	...	...	...	3	2 0
(3)	Luhara	„	...	...	...	38	13 6
(4)	Bokriawas	„	...	...	...	43	12 0
(5)	Kadera	„	...	...	...	30	11 6
(6)	Rabaota Supply Cut	...	...	...	...	2	3 0
(7)	Jhanpri Buud	...	...	...	...	12	10 6

7. **Contouring tanks along Tonk Road.—**The total amount spent on this head during the year amounts to Rs 35-11-9, being the cost of taking the contour levels of the beds of bunds Sheodoongri, Rawatwala, Halolao Newai, Helolao Chaksu and Rabaota.

V.—MISCELLANEOUS PUBLIC IMPROVEMENTS.

1. **Jaipur-Sewai-Madhampur Railway.—**All the existing works connected with the Railway, viz., the earthwork of the banks and cuttings, plantations, road crossings, buildings, etc., have been maintained in good order throughout the length from Sanganere to Sewai-Madhampur.

A new earthen *dolie* has been made up round the compound of the Jaipur Loco yard, and *surkanda* grass planted on the top.

The works of the Madhopur engine-shed and station building, finished last year, have been measured up and finally paid for.

(Sd.) K. N. MOOKERJI,
Assistant Engineer.

ANNUAL REPORT

OF

L A L A I N D R A S A H A I

Assistant Engineer

WESTERN DISTRICT, P. W. D.

JAIPUR STATE

FOR THE

YEAR ENDING 31ST AUGUST 1903.

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ANNUAL REPORT of Lala Indra Sahai, Assistant Engineer, Western Districts, P.W.D., Jaipur State, for the year ending 31st August 1903.

I.—GENERAL REMARKS.

1. **Introduction.**—The following is a brief record of work done during the year from 1st September 1902 to August 31st, 1903.

2. **General Remarks.**—The average rainfall for the Western Districts has been only 16.36 inches against a normal of 20 to 25 inches, but the fall being very gradual and timely, the general conditions have been fairly satisfactory. The average rate of grain (barley) has been from 14 to 18 seers to a rupee throughout the year.

There were many miscellaneous petty isolated works either postponed or left incomplete from last year, owing to their not forming good relief works; and only these, together with a few new urgent works, were taken in hand and completed this year, necessitating great trouble and the worry which always attends the carrying out of works of this nature.

3. **Statement of Expenditure.**—The average monthly expenditure on works in both the Western sub-divisions has been Rs.12,353-9-9; and the following gives the total expenditure incurred this year through this sub-office:—

Head of account.	TORI SUB-DIVISION.		MOZABAD SUB-DIVISION.	
	Credit.	Debit.	Credit.	Debit.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Last year's balance	43,857 15 10	.. ..	17,058 12 0	...
Superintending Engineer's Account	52,348 8 7	1,075 3 9	73,824 0 3	745 14 9
Unclaimed wages	218 13 9	367 8 9	...	...
Security Deposit	333 0 0	328 0 0	...	...
Miscellaneous Accounts	398 1 9	1,467 3 3	174 6 0	15 0 0
Assistant Engineer's Office and District Establishment.	...	5,638 12 6	...	4,100 6 9
Irrigation works ... ..	...	53,533 13 6	1 15 3	54,502 9 7
Buildings ... ..	...	...	...	564 6 0
Wells and Baories ... ..	...	934 13 9	...	684 5 0
Roads ... ..	...	817 11 9	6 0 3	14,245 1 8
Ajmere Road Income ... ..	...	...	26 15 9	...
Tori Sagur Turbine Revenue ... ..	...	358 10 4	...	...
Imprest and Advances Account ... ..	...	7,526 7 3	4,785 14 0	1,327 5 0
Total	97,156 7 11	72,058 4 10	95,877 15 6	76,185 0 9
Balance in hand on 31st August 1903 ... ..	...	25,098 3 1	...	19,092 14 9
GRAND TOTAL	97,156 7 11	97,156 7 11	95,877 15 6	95,877 15 6

Total expenditure, Rs.72,058-4-10 + Rs.76,185-0-9 = Rs.1,48,243-5-7.

4. **Rainfall and percentage of run off.**—The rainfall up to 30th September 1903 has been as noted below :—

Stations.							Rainfall in inches to 30th September 1903.	Percentage of run off
Kaligh	...	...	...	...	...	...	24.50	3.24 per cent.
Chaparwara	...	...	...	...	...	...	13.43	
Phagi	...	...	...	...	...	...	13.95	
Chandsin	...	...	...	...	...	...	13.43	2.81 per cent.
Tori	...	...	...	...	...	...	8.76	3.41 „
Punwar	...	...	...	...	...	...	17.35	10.22 „
Dabar Dumba	...	...	...	...	...	...	22.95	
Etagoi	...	...	...	...	...	...	16.57	
Total							120.94	
Average							16.36	

5. **Surveys.**—The following surveys were carried out this year :—

- | | |
|---|---|
| 1. Nadas below Mashi Supply Cut to Ganor. | 13. Ducts from Chandsin Canal. |
| 2. Tori Sagur Canal ducts. | 14. Thaonla Tank Canal. |
| 3. Road from Toda to Rajmahal. | 15. Garara Tank Canal. |
| 4. Lakholai project near Rajmahal. | 16. Kali Dongri Tank and Canal. |
| 5. Dhipru Nullah Bund. | 17. Ram Sagur Lamba I. Canal. |
| 6. Rampura Nullah project. | 18. Baneria Tank duct to Rai Singhpora. |
| 7. Simeli project. | 19. Gopipura Tank, raising 2 ft. H. W. L. |
| 8. Nullahs of Chandsin hill. | 20. Ghatey Nullahs bund. |
| 9. Baneria project. | 21. Gaijee project. |
| 10. Khuara T. Canal. | 22. Jaolee project. |
| 11. Chalgawas project. | 23. Mohanpura Tank near Mandi. |
| 12. Islampur Tank project. | 24. Contour Survey of 47 tanks. |

6. **Journal.**—The distance travelled by the Assistant Engineer on duty during this year has been :—

					Miles.
By road	...	...	...	...	2,306
By rail	...	...	...	...	72
Total					2,378

7. **Summary of Important Works.**—All arrears of work not having been completed, the head-quarters of the Assistant Engineer remained fixed at Chandsin, and the Western and the South-Western sub-divisions have been under his direct charge throughout the year.

The following work was done during the year :—

1. Completed 33 important works before the rains, and started 12 other important works which could not be completed before the rains.
2. Completed and closed the account of 212 works and submitted 162 Final Bills.
3. Executed 83 other petty works.
4. Surveyed 23 projects and contoured 47 tanks.
5. Checked all earthwork done before the rains.
6. Carried out all the out-door and office work of both the sub-divisions.
7. Prepared 81 estimates.

8. Overseers and Sub-overseers—

Babu Abdul Rahim, Overseer	} Were in charge of works and have all given satisfaction.
" Chandu Lal	"	...	
" Pooran Lal, Sub-overseer	...	...
" Gulzuri Lal	"	...	
" Bansidhar	"	...	
" Wajid Khan	"	...	} Were temporarily employed for survey works and have done well.
" Gunna Lal	"	...	
" Hari Singh	"	...	
" Chandi Pershad	"	...	Resigned his post to take up a better post elsewhere, and was replaced by B. Wajid Khan.

9. Office staff—

Lala Anandi Lal, Head Clerk of Tori Sub-Division...	} Constitute the whole of the office staff, and have all performed their duties satisfactorily.
" Moti Lal, Head Clerk of Mozabad	
" Sunder Lal, Clerk	
" Unrao Singh,	
" Ganeshi Lal,	
" Chandoo Lal, Store-keeper	
" Jamna Pershad, Serishtadar of Tori Sub-Division	
" Ram Sarup, Serishtadar of Mozabad Sub-Division	
Munshi Gulam Dustgir, Naib	
Pandit Shanker Lal, Naib	
" Parshotam Narain, Girdawar Khazanchi	
Sah Lal Chand	...
Lala Chowtey Lal, Sub-Treasurer	...
Pandit Lachmi Narain	...

10. Office Work.—The following is a brief summary of office work done in both the sub-divisions:—

Papers.	Tori sub-division.	Mozabad sub-division.	Total.
<i>English.</i>			
Letters received and despatched	605	332	937
Mustor rolls and <i>intotas</i> checked	3,200	2,436	5,636
Day-books prepared	898	545	1,443
Bills prepared	181	221	402
Final bills of works completed	73	69	102
Disbursement sheets prepared	215	164	379
Stock lists	217	120	337
<i>Persian office.</i>			
Papers received and despatched	8,829	6,434	15,263

II.—ORIGINAL WORKS AND REPAIRS TO BUILDINGS.

11. Rest-houses.—*Chandsin*—The Chandsin rest-house is nearly completed. The detail of accommodation was given in last Annual Report. Cost up to date Rs.2,755-8-6.

Demeh—Bungalow repaired and whitewashed—

Part occupied by police ... Cost Rs.97-1-3.

Part kept as rest-house ... Cost Rs.80-7-6.

A cook-room 12' X 8' has been added to the out-houses of the Demeh bungalow to provide for the native staff on tour. Cost Rs.117-2-9.

12. Staff quarters.—*Demeh*—Moharrir's quarters repaired. Cost Rs.145-2-0.

Chaparwara—Moharrir's quarters repaired. Cost Rs.101-3-0.

Tori—Petty repairs done in the Overseer's quarters. Cost Rs.49-11-9.

Chandsin—Petty repairs done in the temporary staff quarters. Cost Rs.281-9-0.

13. Mohafiz Chowkies.—Petty repairs were done to *Kalyanpura* and *Jacobabad* Chowkies, and new doors supplied to *Soobhdand* and *Mandi* chowkies.

14. Wells and Baories.—Seven wells of *Todarai Singh*, Deswali well at *Mozabad*, *Kuhara* well, *Harbhagutpura* well, and *Chaparwara* well deepened and repaired. The Chatriwali *Baori* at *Ganor* and the *Mitha Baori* at *Kerli* were deepened and repaired. The new well at *Saitiwas*, 7 ft. in diameter, with a total depth of 21 ft., has been finally completed; the depth of water in this latter well being 7 ft. in June 1903. Cost to completion of work has been Rs.530-14-0.

III.—ROADS.

Average maintenance cost this year.

15. Ajmere Road, II section, from mile 4½ to 52nd, 47½ miles.—The total expenditure during the year has been Rs. 12,497-15-11, which gives an average of Rs. 260-6-0 per mile for this year.

Kunker.—Kunker has been collected for 3rd layer in miles 5, 9, 12 in full and 10 in part, and in miles 5, 9, 10, 22, 25, 27, 28, 29, 30, 31, 35, 38, 39, 40, 41, 42, 43, 44 and 45 for repairs—

			C. ft.	Rs.	a.	p.
For 3rd layer	...	...	41,844	for	3,254	4 0
„ ordinary and leek repair	...	...	40,991	„	1,218	6 6
			82,835		4,472	10 6

Consolidation.—Consolidation 10 ft. wide has been done in miles 6, 8, 10, 11, 18 and 23 in full and 41 in part, and leek repairs done in miles 22, 25, 27, 28, 29, 30, 35, 38, 39, 40, 42, 43, 44 and 45.

General repairs done to all the miles wherever found necessary :—

			S. ft.	Rs.	a.	p.
Third layer	...	...	343,218	2,078	2 3	
Leek and general repairs	...	...	456,036	2,423	5 0	
			799,254	4,501	7 3	

Earthwork.—Earthwork to patries has been done in miles 6, 8, 10, 11 and 18 in full, and wherever necessary.

			C.ft.	Rs.	a.	p.
For 3rd layer	...	...	264,598	473	4 6	
Repairs	...	...	408,012	813	13 0	
			672,610	1,287	1 6	

Income.—The income from the road has been as under—

				Rs.	a.	p.
Dry trees, etc.	...	...	...	129	15 9	
Dāk bungalows rent	...	...	...	12	0 0	
Lac	...	...	...	30	0 0	
Total	...	...	...	171	15 9	

Other Works.—Other works in connection with this road have been as under :—

	Rs.	a.	p.
1. Removing and preparing a latrine at Nirana Rest-house	26	14	9
2. Repairs to chappar at Dudoo Rest-house	41	12	3
3. Repairs to bridges	398	11	6
4. Third layer consolidation of the bottom of Bandi river,	85	1	6
5. Consolidating khurras in miles 30 and 31	19	0	0

16. **Nirana Malpura Kutch Road, 38·63 miles.**—The following kunker causeways, culverts and road dams have been built this year. Total expenditure to completion has been as under :—

	Rs.	a.	p.
1. Two ramps near Pachoor, miles 25 and 26	151	6	6
2. Mashri river ramp, mile 19	202	1	6
3. Bijolao and Mulirha Nullah ramp in miles 6 and 7	230	2	9
4. Sewa Nullah kunker ramp, mile 17	47	6	6
5. Two ramps at Ganor, mile 33	161	7	0
6. Dudoo Nullah ramp, mile 16	217	15	3
7. Two kunker ramps at Khudiala Tank, mile 12	155	7	9
8. Two road dams across Dudoo Nullah, mile 16	296	10	0
9. Pucca culvert in mile 17 over Sewa Talao duct	171	11	0
10. Breaking and reconstructing pucca culvert over H. L. North canal of Chaparwara	70	7	0
11. Earthwork, 2,048,527 c.ft.	6,291	14	3
12. Other items	1,572	10	0
Total	9,569	3	0

Maintenance.

Nirana-Malpura Road.—Rupees 626-8-3 has been spent on general repairs, which gives an average of Rs.16-3-6 per mile—

	Rs.	a.	p.
Earthwork, 88,351 c.ft.	207	12	0
Miscellaneous repairs and other items	418	12	3
Total	626	8	3

17. **Raj Mahal Deoli Kutch Road, 8 miles.**—1,994 c.ft. kunker collected and all the sandy portions and the important causeways metalled with kunker. Expenditure up to August 31st has been as under :—

	Rs.	a.	p.
Earthwork 20,807 c.ft.	51	10	3
Consolidating kunker 21,745 „	508	3	9
Drystone pitching 1,927 „	52	15	6
Repairing old consolidated portions 18,810 s.ft.	162	9	0
Whitewashing mile and furlong stones, etc.	2	15	6
Extending and repairing old kunker khurras 4,999 c.ft.	121	1	0
Contingencies	41	7	0
	940	14	0
Materials at site	17	2	6
Total	958	0	6

18. **Deoli-Tonk fairweather Road, 16 miles in aggregate, within the Jaipur boundary.**—Rupees 247-9-6 spent on general repairs, which gives an average of Rs. 15-7-6 per mile this year.

	Rs.	a.	p.
Earthwork, 35,817 c.ft.	91	6	9
Miscellaneous repairs and other items	156	2	9
Total	247	9	6

IV.—IRRIGATION WORKS (ORIGINAL).

TORI SUB-DIVISION.

19. **Bhairon Sagar at Chandsin.**—This large irrigation work has been fully described in the previous annual reports. Towards the end of the season the work remained suspended for want of funds; and only such work was carried on as was absolutely necessary in order to enable the water stored this year to be used. All extra staff was reduced and only a minimum of expenditure was incurred. A native doctor and his small dispensary was, however, maintained for the use of the subordinate staff still remaining on the work. The following works were done in connection with this scheme during the year :—

1. The completion of a central drift 3 miles long, 5 ft. wide in the South Canal for the irrigation of the Chandsin village land. This work had to be done in great haste, at ten days' notice, in September 1902, and the duct was used for irrigation this year.
2. Digging a central drift in the North Canal 9 miles long and 5 ft. wide, for the use of this year's water; the work is nearly completed.
3. Filling in the foundations and completing such portions of the corewall as were started before.
4. Repairing the diversion spur at Chandsin.

Babu Abdul Rahim, the overseer in charge here at Chandsin, not having sufficient works here to employ his time, was given charge of other works also in the district, all of which he carried out very satisfactorily.

Total expenditure up to 31st August on Bhairon Sagar has been as under :—

Detail of Expenditure.

ITEMS.	During the year.			Up to date.		
	Rs. a. p.			Rs. a. p.		
Earthen dam	4,661	12	3
Pucca dam	5,699	2	3
Low level north sluice	782	5	3
Low level south sluice	1,432	11	0
Irrigation canals	7,883	7	6
Branches and ducts	209	9	9
Compensation for wells, etc.	39	14	9
Rest-house	1,644	1	6
Temporary staff quarters	233	12	3
Shelter for workpeople	188	8	0
Tramway plant	167	15	9
Famine expenditure	23,593	14 10
Repairs to staff quarters	47	12	9
Contingencies	1,711	8	3
Total	24,702	9	9
Materials at site	4,128	11	0
Total	20,573	14	9
					1,40,670	13 8

20. **Kali Dongri Tank.**—This is a small new irrigation tank fully described in the last annual report. At first the work was not pushed on lest the labour on Rampura and Hoshapura tanks, which were then approaching completion, might be drawn away to this new

work. The earthwork of parts of the bund has been completed and the work of the corewall has been in progress. The following is the detail of expenditure incurred this year:—

			Rs.	a.	p.
Earthwork embankment, 798,098 c. ft. ...	...	...	2,770	5	0
Clearing well for water ...	...	...	6	0	0
Earthwork foundation of corewall, 7,822 c. ft. ...	...	...	18	12	6
Shelter for workpeople ...	...	...	112	5	3
Survey expenses ...	...	...	141	2	0
Head Office charges ...	...	...	485	1	7
Contingencies ...	...	...	811	4	0
Total ...	...	...	4,344	14	4

21. **Lampra Tank at Bunthali.**—This is a small village tank, extended and repaired as described in the last annual report. The bund with its sluice and its supply cut has been completed and the canals are in progress.

Detail of expenditure up to end of 31st August 1903:—

			Rs.	a.	p.
Earthwork, 1,282,199 c. ft. at Rs.3-12-11 %.	...	...	4,888	1	0
Masonry work of sluice, 3,217 c. ft. at Rs.10-9-5 %	...	...	340	10	3
Irrigation canals, 85,399 c. ft. at Rs.2-7-0 %	...	...	208	1	3
Supply cut, 104,850 c. ft. at Rs.2-5-8 %	...	...	247	2	3
Contingencies ...	...	...	836	15	1
Other items ...	...	...	937	15	1
Total ...	...	...	7,458	12	11
Materials at site... ..	...	...	17	11	0
Total ...	...	...	7,476	7	11

22. **Hoshapura Tank.**—This tank was fully described in the last annual report and has been finally completed this year. Its canal, 2 miles long and 6 ft. wide, has been supplied with six earthen pipe sluices. It has got a simple pucca waste weir 50 ft. long combined with a pucca iron sluice. It has filled up and overflowed this year.

Total expenditure to completion has been Rs.12,201-0-4 as detailed below.—

			Rs.	a.	p.
Earthen dam ...	...	...	5,004	10	9
Outlet sluice ...	...	...	1,073	13	1
Corewall ...	...	...	1,268	10	6
Pucca weir ...	...	...	1,294	11	0
Irrigation canals ...	...	...	1,028	0	9
Nallia sluice in masonry ...	...	...	75	3	10
Other items ...	...	...	2,455	14	5
Total ...	...	...	12,201	0	4

23. **Roopahaily Tank.**—This work, as described in the last annual report, has been completed. An extra piece of corewall 150 ft. in length has been built in the heart of the bund this year, in addition to the two pieces, 134 and 325 ft., built last year; the aggregate length of the corewall in this bund being now 1,139 ft. The tank has been raised 3 ft. and

the increased capacity is 11·88 million c. ft.; the total capacity of the tank being now 21·16 million c. ft. A mohafiz chowkey in connection with this work is in progress, and all other work has been completed this year as detailed below :—

Detail of Expenditure.

Items.	During the year.		Up to 31st August 1903.	
	C. ft.	Rs. a. p.	C. ft.	Rs. a. p.
Earthwork embankment	255,312	881 8 9	1,159,164	3,774 13 0
Corewall masonry ... ..	...	...	3,142	279 10 0
Extra piece of corewall	3,203	431 2 0	3,203	431 2 0
Sluice masonry	962	130 14 6	1,034	139 10 9
Clearing canals	10,360	24 14 6	10,360	24 14 6
Nalha sluices in masonry	No. 7	53 13 0	No. 7	53 13 0
Contingencies ... ..	...	340 6 3	...	667 4 4
Other items ... ..	...	565 8 7	...	762 3 10
Total ... ..	...	2,437 3 7	...	6,133 7 7
Materials at site ... ..	...	— 3 13 0	...	95 4 9
Total ... ..	...	2,433 6 7	...	6,223 12 4

24. **Kerli Sagur.**—The work of adding a new corewall to this tank has been finally completed this year, and the total length of the corewall in this bund is now 3,061 ft.

Expenditure to completion of this corewall is as under :—

Earthwork of bund, 55,764 c. ft. @ $\frac{1}{100}$ Rs.3-11-3	...	=	Rs. a. p.
„ digging foundation and refilling <i>jhirees</i> , 3,78,790 c. ft. @ $\frac{1}{100}$ Rs.2-10-2	...	=	998 14 0
Corewall masonry, 49,105 c. ft. @ $\frac{1}{100}$ Rs.14-4-8	...	=	7,017 14 6
Lime plaster, 3,480 s. ft. @ $\frac{1}{100}$ Rs.3-1-11	...	=	108 9 9
Other items ... ..	...	=	1,067 10 8
Total ... ..	...	=	9,399 12 8

25. **Baneria Tank.**—The work of inserting a corewall in this bund has been finally completed, and total length of the corewall in it now is 3,100 ft. Expenditure to completion of this work has been as noted below :—

Earthwork repairing bund, 36,341 c. ft. @ $\frac{1}{100}$ Rs.2-11-2	...	=	Rs. a. p.
Corewall masonry, 27,392 c. ft. @ $\frac{1}{100}$ Rs.14-13-0	...	=	4,040 0 3
Lime plaster, 4,350 s. ft. @ $\frac{1}{100}$ Rs.2-12-4	...	=	120 10 0
Other items ... ..	...	=	978 0 7
			5,236 12 1
Materials at site ... ..	...	=	167 14 9
Total ... ..	...	=	5,404 10 10

26. **Gopipura Tank.**—This was a small tank constructed in the famine of 1900, and has been raised 2 ft. this year. The total length of this bund is now 0·74 mile, and the total capacity of this tank is now 4·69 million c. ft. of water. The work of raising the bund and its sluice has been finally completed, and the total cost of raising has been as noted below :—

Earthwork of extending and raising the bund	...	Rs. a. p.
Masonry work of raising the sluice	...	1,408 10 3
Other items ... ..	...	127 1 6
	...	71 5 3
Total	...	1,607 1 0

27. **Ghati Bunds.**—The drainage water of the Ghati Hills and below them used to damage the North Tori canal at mile 6 and silt it up every year. Two small sand dams were thrown up at the foot of the hills to store about 8 ft. of water above the nullah bed, spreading over a pretty large area and soaking into the sandy soil. The bunds were ready before the rains, and, as far as the result of this year is concerned, they worked satisfactorily. If they are not breached by any sudden rush of water, they will always serve the purpose for which they are intended. Total cost to completion, Rs.1,194-3-3.

28. **Nasrida Tank.**—This bund has been raised 3 ft. and the work finally completed. The total capacity of the tank is now 56·76 million c. ft. standing 10 ft. deep water over its sluice bed and the total length of the bund is now 1·84 miles. Total cost of raising has been Rs.12,142-6-6.

29. **Garara Tank.**—The bund has been raised 2 ft. and a new H. L. sluice for the irrigation of high land built at the north end. The new canal, 1·20 miles long and 6 ft. wide, is in progress. The total capacity of this tank is now 109·66 million c. ft., and the total length of the bund is now 0·85 mile, storing water to a depth of 16 ft. over its sluice bed.

Expenditure up to August 31st has been Rs.1,064-9-11.

			Rs.	a.	p.
Earthwork extending and raising bund	...	142,872 c. ft.	443	14	6
Masonry of raising sluice	...	1,024 „	163	14	0
Canal...	...	19,094 „	43	9	0
Other items	...	...	413	4	5
Total			1,064	9	11

30. **Halolao Tank at Kalumda.**—The H. W. L. of this tank has been raised 1 ft. by closing the eastern waste weir and extending the bund 500 ft. The total capacity of the tank is now 55·68 million c. ft., and the total length of the bund is now 1·56 miles, storing 0 ft. of water over its sluice bed.

The sluice walls have been raised $1\frac{1}{2}$ ft. and a new duct, 0·20 mile long and 4 ft. wide, dug this year. One pucca escape in the south canal to fill the village tank and the work of the silt clearance of the canal are in progress.

Expenditure to August 31st has been Rs 328-2-3.

31. **Ram Sagur at Lamba Harisingh.**—The inner slope of the bund used to cut away by the wave action, and so the kutchra parts of the bund, where there is no corewall, are being pitched with stone, the belt of pitching being 10 ft. wide, standing half above and half below the H. W. L.

A new sluice 4 ft. wide has been built for the irrigation of the high land, and its new canal, 0·4 mile long and 4 ft. wide, is in progress.

The L. L. N. Canal has been widened from 6 to 10 ft. in the first two miles and the rest simply cleared. Its pucca works, also two bridges and six crossing sluices, have been extended accordingly. The L. L. S. Canal has been cleared and six new earthen pipe sluices have been built in both of these canals.

Expenditure up to August 31st has been—

	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Necessary works, H. L. sluice	...	637	9	6	+	288	4	6	= 925 14 0

32. **Rampura Tank.**—This tank, as described in the previous report, was completed last year. This was a famine work, and its catchment being largely intercepted by old works, a new supply cut 0·88 mile long and 10ft. wide was lately sanctioned. The work is in progress, and expenditure up to 31st August has been Rs. 111-14-0 only.

It is hoped that this will suffice to fill the tank.

33. **Sri Ramnagar Tank.**—This tank is to be provided with a one foot sluice for the irrigation of the high land, and the work is in progress. Expenditure up to 31st August 1903 has been Rs.18-5-0.

MOZABAD SUB-DIVISION IRRIGATION WORKS.

34. Chaparwara Supply Cut from the Mashī River.—The whole of this supply cut, 13 14 miles long, has been dug to a bed width of 30 ft. with slopes 1 to 1, and the Gagra and Kutchmaria nullah crossings finally completed and provided with pucca escapes.

A regulator worked by equilibrium gates at head works, a pucca fall and a well duct have been built and the remaining pucca works are under consideration. This new cut has been useful in carrying an additional supply of water to Chaparwara Sagur this year.

The following gives the detail of expenditure up to August 31st :—

No.	Items.	Quantity.	Amount.
<i>Main Canal.</i>			Rs. a. p.
1	Cutting dog-l-el ... ... ... ... ...	...	122 14 3
2	Earthwork 	8,872,264 c.ft.	29,381 10 3.
3	Jhajra stone 	86,451 c.ft.	607 1 6
4	Cutting and digging stone 	180,710 c.ft.	1,322 0 9
5	Hazara and milestone 	68 No.	119 3 3
<i>Gagra Nullah Crossing.</i>			
6	Pucca masonry 	16,209 c.ft.	2,718 9 0
7	Cut-stone payas with Jhree 	22 No.	151 0 0
8	Katla steps 	267 c.ft.	116 12 0
9	Pointing 	4,039	60 12 6
10	Pitching 	4,235 c.ft.	209 0 3
11	Slab work 	1514	66 2 9
12	Earthwork 	106,155	431 14 6
<i>Kutchmaria Nullah Crossing.</i>			
13	Earthwork 	753,837	2,904 2 9
14	Pucca masonry 	31,123	4,532 13 0
15	Katla work 	459 7	200 10 0
<i>Head Regulator.</i>			
16	Pucca masonry 	2,913	314 2 3
17	Cut-stone work 	132 c.ft.	63 1 6
18	Pucca well duct near Kutchmaria... ... ... ... ...	...	206 5 9
19	Contingencies ... ... ... ... ...	...	2,669 4 0
20	Materials at site ... ... ... ... ...	...	187 14 9
21	Head Office charges ... ... ... ... ...	...	5,997 2 10
22	Other items ... ... ... ... ...	...	607 14 6
Total ... ... ... ... ...		...	53,019 10 1

This and all other works of the Mozabad Sub-Division have practically been in the direct charge of Babu Chandu Lal, overseer, and he has managed them all well and to my satisfaction.

35. Hingonia Tank.—The Hingonia weir, as described in the annual report of 1900, is being converted into an impounding reservoir. The drainage area above the site of the bund is 150 sq. miles, chiefly sandy soil. The bund is to be 1·20 miles long, 10 ft. wide at top, with the inner and outer slopes of 4 to 1 and 2 to 1, to store 15 ft. of water over its sluice bed. The capacity of the tank will be 350½ million c. ft., spreading over an area of 4,322 bighas, capable of irrigating 8,764 bighas.

The corewall will be placed in the heart of the inner slope at H. W. L. and carried up to a height of 2 ft. above it.

A preliminary survey for the canals has been made to ascertain their general direction, but the final location will be settled next season.

The whole of the project is estimated to cost Rs. 75,000.

An allotment of Rs.15,000 was made for this work by the Durbar last year, but no more funds could be obtained for the work this year from last unexpended balance, and after reserving a sufficient sum for the survey, designs and tools, a sum of Rs.9,000 only was available for this year's work. The proposals for utilizing this sum to the best possible advantage were finally settled in February, and consisted in building in 1,300 ft. of corewall in the kutchra portion of the bund in the river bed and further on towards the east, where the soil was bad, to a height sufficient to store 6 ft. of water behind the present weir, i.e., 4 ft. above the Sahadra Supply Cut.

The corewall had therefore to be built 9 ft. above the river bed to allow a margin for the flood discharge over the weir, with earthwork on both sides 3 ft. higher still round the corewall.

The river water behind the weir did not dry up till April, and only $2\frac{1}{2}$ months were left before the rains for all this work. No rock was expected for the foundation of the corewall in the river bed, but in straightening the original bund line by cutting off two sharp curves in the old weir, rock was fortunately found on the new line at an average depth of 5 ft. below the river bed, by which the work was much simplified. No rock was, however, found on the eastern river bank, but the foundations here, varying from a depth of 10 ft. to 4 ft. from the ground surface, were all more or less above the water surface and the sub-soil water gave no further trouble in consequence. Babu Chandu Lal, overseer, worked hard here and got all this work done before July 15th.

The weir, which is 300 ft. long, overflowed four times in July, August and September, to a maximum depth of 2 ft. deep as detailed below :—

(1) 22nd July 1903, 6 P.M. to 25th July, midday	... 2 ft. deep.
(2) 7th August, 4 P.M., to 10th August, 12 A.M. ...	... $1\frac{3}{4}$ "
(3) 7th September, midday, to 10th September, evening ...	... 1 "
(4) 16th September, 3 P.M., to 17th September, 6 P.M. ...	... $\frac{1}{2}$ "

The new pucca regulator fitted with equilibrium gates was built a little lower down the Sahadra Canal, the cost being met from the sum sanctioned for the original weir and was ready before the rains. A gap was left in the corewall of the bund in front of the regulator, and the canal banks between this and the bund were strengthened. Cost of regulator Rs.275-5-3 up to August 1903.

Expenditure up to 31st August, excluding cost of regulator, has been Rs.8,994-1-6 as under :—

No.	ITEMS.	Quantity.	Amount.
			Rs. n. p.
1	Earthwork of <i>pal</i>	587,535	1,901 6 0
2	Removing sand bund	183,930	459 12 9
3	Earthwork of foundation	40,346	133 9 0
4	Baling out water ... ..	...	34 11 3
5	Digging soft stone in foundation	7,628	24 12 0
6	Pucca masonry of corewall	40,661	5,895 13 3
7	Earthwork of filling <i>jhree</i>	41,078	58 10 0
8	Contingencies ... ..	...	436 10 3
9	Amount of other items... ..	...	48 13 0
	GRAND TOTAL ... ..	...	8,994 1 6

36. Churu Sagar.—This tank, as described in the last annual report, has been raised and finally completed.

This tank filled 6½ ft. deep this year early in the rains. 1½ ft. of this water was used up in the irrigation of the kharif crops, but it filled again to a depth of 6½ ft. later on, the H. W. L. of this tank being 8 ft. over the sluice bed.

Total expenditure to completion has been :—

			Rs.	a.	p.
Original works ...	...	...	15,259	15	0
Raising 2 feet ...	...	...	3,326	3	3
Total	...	...	18,586	2	3

as detailed below.

No.	ITEMS	Quantity.	Amount.
			Rs a. p.
1	Earthwork ... tank p...	2,114,434 c.ft	8,217 13 3
2	Pucca masonry ... anal—The	46,867 "	7,739 0 3
3	Do. plaster ... been clear	10,070 s.ft.	337 12 9
4	Arch masonry ...	369 c.ft.	92 4 0
5	Cutstone work ... have bet	292 c.ft.	4 9 13 6
6	Katlas work... This ci	408 s ft.	170 3 0
7	Shelter for workpeople ... canal b...	...	140 0 9
8	People paid gratuitously ... been clear	...	150 6 0
9	Contingencies ...	...	1,125 8 9
10	Other items ...	...	82 14 0
	Total	...	18,586 2 3

37. Agar Sagar.—This tank, as described in the last annual report, has been finally completed. Total expenditure to completion has been Rs.2,794-13-6.

			Rs.	a.	p.
Earthwork ...	...	...	2,257	2	0
Masonry work ...	...	...	191	0	0
Other items ...	...	...	346	11	6
Total	...	...	2,794	13	6

38. Datoli Tank.—This tank, as described in the last annual report, has been finally completed and total expenditure to completion has been as under :—

			Rs.	a.	p.
Earthwork ...	...	...	2,003	11	6
Masonry work ...	...	...	717	13	9
Other items ...	...	...	186	10	0
Total	...	...	2,908	3	3

39. Kala Talao near Govindi.—This tank has been fully described in the last annual report. Its western canal has been extended 1.16 miles and the eastern canal, 1.70 miles long, 4 ft. wide, has been dug this year, the total length of both the canals being 2.86 + 1.70 miles. Two crossing sluices have been built, one in each canal to pass over the drainage which fills the old Govindi Sar. Some remaining petty works on the canals are in progress, and expenditure up to August 31st is as under :—

			Rs.	a.	p.
Earthwork ...	...	...	5,285	13	9
Masonry works, etc. ...	...	...	461	3	3
Other items ...	...	...	1,080	8	3
Total	...	...	6,827	9	3

40. **Dhamalia Tank.**—This tank, as described in the last annual report, has been completed. A new duct, for the irrigation of the higher land below it, is in progress. The expenditure up to August 31st has been Rs.758-7-6 only.

41. **Kishanpura Tank.**—A high level one foot sluice drain has been built this year. Cost Rs.66-14 up to August 1903.

42. **Kala Talao, Nirana.**—A new high level one foot sluice drain has been built this year. Cost Rs.119-1-3 up to August 1903.

43. **Jetpura Tank.**—The earth of this bund being unsound, big holes were produced, which were opened out and filled in with rammed earth. One supply cut to the tank was cleared and a new supply cut, 2,030 ft. long and 10 ft. wide, has been dug. Cost Rs.485-6-3.

44. **Old Ram Sagur at Churv.**—This was a village tank and it has been repaired. The dam is 2,700 ft. long and 8 ft. wide at top; and a new sluice worked by wooden plugs has been built for it. Cost to completion has been Rs.364-7-3 only.

IRRIGATION (REPAIRS).

Tori Sagar Main Canal.

Improvements in canals.

45. **Tori Sagar Main Canals.**—The cost of

1. Low Level North Canal—masonry has been done at Nos. 5, 6, 9, 10 and 11 repaired and strengthened.
2. High Level South Canal—masonry has been done at Nos. 18 repaired and strengthened. Total earthwork 472,941 c. ft. masonry sluice 1,418-5-6.
3. No permanent gangs were kept. All work was carried out by task work.
4. One 40 ft., two 20 ft., four 10 ft. and one 5 ft. inlets and two crossing sluices have been built in the South H. L. main canal. Cost Rs.1,579-1-0.
5. The Rampura escape of the south main canal was provided with a slab footpath over the piers for the convenience in opening or closing the shutters. Cost Rs.63-4-0.
6. A pucca syphon in the south main canal was built at Ratwara for leading the village tank water across the canal to the fields. Cost Rs.134-9-3.
7. The bridges at either end of the pucca escape on the south main canal for passing the overflow of the Tori Sagur across the canal were provided with equilibrium gates for shutting off the canal at once at any time when water runs high in the escape. Cost Rs.809-11-9.
8. Rampura, Talandoo, Basara, Kacheria and Durgapura escapes, etc., were provided with an apron of stone-pitching. Cost Rs.259-9-9.
9. Thirteen 4 ft. sluices of both the main canals were provided with equilibrium gates for facility in working them. Cost up to 31st August 1903 Rs.806-11-8.
10. One pucca escape 100 ft. long in the south main canal near Talandoo is in progress.
11. Two crossing sluices were built at the crossing of Dongri and the Bhawalpur ducts on the Tori main canal with old channel iron grooves for the boards instead of cutstone work, with a view to reduce the cost by saving the expense of the cutstone work. Cost Rs.63-4-4.
12. At the head of the intermediate canal, where it branches off from the L. L. north canal near headworks, an equilibrium gate has been fitted in the bridge to serve as a regulator. Cost Rs.60-13-3.
13. Jankipura, Sadapura, Larabia branches have been cleared and strengthened. Cost Rs.977-11-3.

14. The clearance of many minor ducts is in progress.

15. 109 small side sluices of both the main canals were provided with iron eyelets and bars for locking the shutters. Cost up to 31st August Rs.417-8-9.

46. South Supply Cut from the Mashī River to Ganor Tank.—One side sluice, one escape with equilibrium gates, six well ducts, three syphons and a combined syphon and a foot bridge have been built this year. Expenditure up to August 31st has been Rs.6,879-13-9.

47. Panwar Canals.—N. L. L. canal, the first 3.00 miles have been widened from 6 to 10 ft., and the remainder 4.02 miles cleared; total length being now 7.02 miles.

S. L. L. canal, the first 2.00 miles have been widened from 6 to 10 ft. and the next 1 mile, cleared 6 ft. wide, and the remainder, 0.4 mile cleared 3 ft. wide. Total length being 3.4 miles.

The H. L. N. canal has been cleared 4 ft. wide throughout its length of 3 miles, and a pucca escape, which was very badly damaged by a previous flood, has been rebuilt with grooved cutstone pillars to shut off the canal supply and to prevent the canal bed from silting up when the water from the waste weir of the—The asses over it.

48. Thaonla Canals.—L. L. South Canal cleared first $1\frac{1}{2}$ miles have been widened from 6 to 8 ft., and the remainder 1.4 miles have been cleared 5 ft. wide; total length being 2.9 miles.

L. L. North Canal.—The first 2 miles have been cleared and widened from 6 to 8 ft. and the remainder 0.72 mile cleared 6 ft. wide. This canal has also been extended 2.4 miles, with a bed width of 6 ft.; the total length of this canal being now 5.12 miles.

H. L. North Canal.—This canal has been cleared all through; it is one mile long and 4 ft. wide.

49. Nasrida Canals.—All the three canals have been cleared and widened from 4 to 6 ft., and seven new earthen pipe sluices have been built. Five kunker ramps have been made to facilitate the passage of carts at different crossings. Cost Rs. 160-7-3.

50. Ramsagar Ganor Canals.—The canals were cleared and 29 new earthen pipe sluices built. Cost up to August 31st Rs. 375-1-0.

51. Dhund Tank at Nagur Canals.—The canals cleared and six new earthen pipe sluices built in. Cost Rs. 139-6-0.

52. Ramsagar Lamba Canals.—A new duct to Mahadeopura has been dug 3.40 miles long, 4 ft wide. Cost Rs. 264-7-9.

53. Haneria Tank Canals.—A new duct to Raisinghpura has been dug, 1.28 miles long 6 ft. wide. Cost Rs. 114-0-3.

54. Saitiwās Canals.—The Saitiwās canals have been cleared.

IMPROVEMENT OF CANALS, MOZABAD SUB-DIVISION.

55. Chaparwara Canals.—The lower bank of the North canal has been strengthened in miles 4, 6, 9, 10, 15, 16, 29, 30 and 31, and of the South canal in mile 7. Cost Rs.2,211-8-3. No permanent gangs were kept; all work was done by task work.

The Mangalwara duct has been extended 0.7 mile, and its total length is 2.1 miles and its width 4 ft. Cost Rs.127-2-0.

In the South main canal three new inlets have been built in miles 3, 5 and 6—cost Rs. 897-2-3—and its sluices have been fitted with sliding bars, etc., as an arrangement for locking the sluices.

A corewall 50 ft. long has been built along the canal in the unsound soil to prevent it from breaching every year at mile 3 $\frac{3}{4}$. Cost Rs.61-4-0. A bridge has been built on the North canal at mile 25 $\frac{3}{4}$ and fitted with equilibrium gates to intercept the rain water for the new Churu Tank.

56. **Kaligh Canal.**—The lower bank of this canal has been strengthened in miles 19, 20, 22, 28 and 34. Cost Rs.2,680-7-9. A bridge has been built on the main canal at miles 32 $\frac{2}{5}$ on the Phagi-Jaipur cart road. Cost Rs 461-7-6. A bridge on the same canal on Shunkerpura-Jaipur cart road at mile 23 $\frac{2}{5}$ is in progress.

The miscellaneous work of extending the wings of 22 crossing sluices at different places all along the canal 34 $\frac{2}{5}$ miles long is in progress.

Thirty-five side sluices on the main canal throughout its length are being provided with tilting gates and locking arrangements in place of loose boards, by slight alteration in the existing works.

23 dhoras and ducts were cleared at the cost of Rs.1,427-4-0.

Akheypura Branch.

The canal has been cleared and strengthened from mile 7 to mile 18 $\frac{2}{5}$. Cost Rs.3,318-13-9.

A bridge has been built on this canal at mile 5 $\frac{2}{5}$ on Sawarda-Nirana cart road. Cost Rs.418-1-9.

Nine outlet sluices, each 4 ft. wide, have been built on this canal at different miles. Cost Rs.836.

7 dhoras and ducts were cleared at the cost of Rs.415-14-3.

57. **Bandolao Canal.**—A culvert has been built on this canal on the Nirana-Akoda cart road. Cost Rs.135-1-3.

58. **Dhobolao Canal.**—The canal has been widened from 6 to 10 ft. and three well ducts, one bridge near Sakhoon and 18 earthen pipe sluices have been built. Cost Rs.2,264-0-9.

59. **Kala Talao Canal.**—This canal crosses a nullah, and every year earthen embankment had to be made up to lead on the canal water. An aqueduct 40 ft. long has therefore now been built. Cost Rs.349.

60. **Neota Canals**—The I. L. South canal, the H. L. North canal, the Ashampura branch, the Girdharipura duct, Palri rajbaha and Masunki duct have been cleared and strengthened.

100 ft. of corewall has been built in the South canal near the Neota Tank to prevent it from being damaged by the sub-soil water.

The wing walls of the H. L. canal aqueduct near Neota have been extended to prevent the canal water bursting out at this point.

One pucca aqueduct has been built across the second nullah on the H. L. canal.

The old Neota aqueduct on the Palri canal has been repaired.

The Neota supply cut has been cleared. The 2nd mile inlet of the supply cut was provided with an apron of pitching with a pucca wall at the toe to prevent scour.

The cut waters of the bridge No. 1 were projected further and provided with grooves for admitting planks into them to shut off the supply.

The iron troughs crossing the cut were repaired. A new bridge was built over the supply cut at mile 2 on the Sanganeer cart road. Cost Rs. 74-8-6.

Petty repairs were done to the Sanganeer weir.

Total expenditure up to August 31st on Neota works amounts to Rs. 1,694-4-6.

61. **Bhambhiao Canals.**—A pucca culvert was built near Ganor. Cost Rs. 61-6-6.

62. **Naya Sagur Canals.**—Nineteen earthen pipe sluices and two crossing sluices were built on these canals. Cost Rs. 116-9-9.

There were 57 other petty works carried out here and there throughout the district this year, too numerous to detail.

REPAIRS AND MAINTENANCE.

63. **Repairs and Maintenance.**—Generally speaking the rainfall has been gentle and light, but on the 22nd July a heavy fall of rain occurred; the total amount registered at this period in four days being 5.60 inches.

64. **Flood Damages.**—The new earthwork of the Hoshapura bund settled a good deal and gave way at one place. The breach was at once closed before it had time to increase, thus only 3 inches of water was lost. The canal running at the foot of the hills breached at several places, and the cost of all repairs has been Rs. 84-1-0.

The tank filled again, and its pucca waste weir, 50 ft. long, overflowed at varying depths of one to ten inches for ten days and nights continuously. The Bandi river being in flood, the new earth round the wing walls of the new Sahadra Supply Cut regulator gave way, and the water working round the wings and passing into the Sahadra Supply Cut rushed into the Sahadra tank, which was already more than three-quarters full. The waste weir of the tank happened to be blocked up by a temporary *doulee*, which a zemindar had at that very time made to lead water to his Nada.

The gap round the wings of the regulator was at once closed, the *doulee* at the waste weir cleared and both the irrigation sluices of the tank opened. All this work was done between 6 P.M. to 6 A.M. on the 23rd July, and had it not been for the energy of the Moharrir, Karori Lall, the bund might have been breached. The tank was for three days more in a very dangerous and critical condition, as various springs through the earthwork of the bund began to leak out everywhere, and new springs forced out a passage as fast as the old ones were closed. Vigorous efforts prevailed however and saved the bund from breaching. Cost of repairs Rs.49-4-9.

The old Govindi Sar Supply Cut having breached and the Govindi tank having only an 18 inches outlet sluice, the tank received more water than it could hold and gave way at two places, losing 2 feet of water. The water lost was not of much account, as this small tank was constructed more for village drinking purposes rather than for irrigation.

Considering the circumstances and the time, the accidents above noted were few and loss insignificant. Excluding the expenditure caused by the breaches, the charges for repairs and guarding all the tanks in both the sub-divisions amounted only to Rs.293-1-6 up to August 31st this year, to which must be added the expenditure to be debited in next year to the end of the rainy season.

V.—WORKS IN OTHER STATES.

65. **Sheo Sagur at Lawa.**—120,144 c.ft. of earthwork, at a cost of Rs.367-15-6, carried out in this tank on behalf of the Raja of Lawa under the supervision of this Department. The bund is completed, sluice built in and the canals are in progress.

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